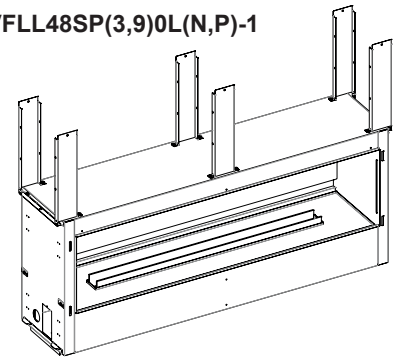
EMPIRE COMFORT SYSTEMS
SINCE 1932

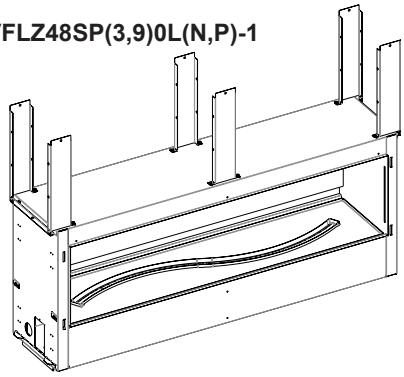
# INSTALLATION INSTRUCTIONS AND OWNER'S MANUAL

## CONTEMPORARY LINEAR VENT-FREE FIREPLACE

VFLL48SP(3,9)0L(N,P)-1



VFLZ48SP(3,9)0L(N,P)-1



**Installer:** Leave this manual with the appliance.
**Consumer:** Retain this manual for future reference.

**WARNING: If the information in these instructions are not followed exactly, a fire or explosion may result causing property damage, personal injury or loss of life.**

— **Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.**

— **WHAT TO DO IF YOU SMELL GAS**
- **Do not try to light any appliance.**
- **Do not touch any electrical switch; do not use any phone in your building.**
- **Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.**
- **If you cannot reach your gas supplier, call the fire department.**

— **Installation and service must be performed by a qualified installer, service agency or the gas supplier.**

## UNVENTED GAS FIREPLACE MODELS

**VFLL48SP(3,9)0L(N,P)-1**
**VFLZ48SP(3,9)0L(N,P)-1**

**GAS-FIRED**
**LISTED**
**UL FILE NO. MH46389**

NATIONAL FIREPLACE INSTITUTE® NFI CERTIFIED www.nficertified.org

We suggest that our gas hearth products be installed and serviced by professionals who are certified in the U.S. by the National Fireplace Institute® (NFI) as NFI Gas Specialists.

**This appliance may be installed in an aftermarket, permanently located, manufactured (mobile) home, where not prohibited by local codes.**

**This appliance is only for use with the type of gas indicated on the rating plate. This appliance is not convertible for use with other gases.**

**This is an unvented gas-fired heater. It uses air (oxygen) from the room in which it is installed. Provisions for adequate combustion and ventilation air must be provided. Refer to pages 17 and 18.**

**WARNING: If not installed, operated and maintained in accordance with the manufacturer's instructions, this product could expose you to substances in fuel or from fuel combustion which can cause death or serious illness.**

**WATER VAPOR: A BY-PRODUCT OF UNVENTED ROOM HEATERS**
**Water vapor is a by-product of gas combustion. An unvented room heater produces approximately one (1) ounce (30ml) of water for every 1,000 BTU's (.3KW's) of gas input per hour. Refer to page 17.**

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# IMPORTANT SAFETY INFORMATION

⚠ **DANGER**: Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

⚠ **WARNING**: Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

⚠ **CAUTION**: Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

***NOTICE***: Addresses practices not related to personal injury.

- **An unvented room heater having an input rating of more than 6,000 Btu per hour shall not be installed in a bathroom**
- **An unvented room heater having an input rating of more than 10,000 Btu per hour shall not be installed in a bedroom or bathroom.**
- **Due to high temperatures, the appliance should be located out of traffic and away from furniture and draperies.**
- **Children and adults should be alerted to the hazard of high surface temperature and should stay away to avoid burns or clothing ignition.**
- **Young children should be carefully supervised when they are in the same room with the appliance.**
- **Do not place clothing or other flammable material on or near the appliance.**
- **Avoid the use of scented air fresheners (plug in type air fresheners, etc. ) while the log set is in operation. Air fresheners produce a residue in the air similar to candles and may produce a soot like substance.**
- **Avoid the use of scented or decorative candles while the log set is in operation. Candles produce a residue in the air that creates a soot like substance. Burning candles while the log set is operating magnifies the problem. It should be noted that candles, in general, produce soot. The amount of time burned and the quantity of candles burned will determine the amount of soot produced and deposited.**
- **Installation and repair should be done by a QUALIFIED SERVICE PERSON. This appliance should be inspected before use and at least annually by a professional service person. More frequent cleaning may be required due to excessive lint from carpeting, bedding materials, etc. It is imperative that control compartments, burners and circulating air passageways of the appliance be kept clean.**
- **DO NOT use this room heater if any part has been under water. Immediately call a qualified service technician to inspect the room heater and to replace any part of the control system and any gas control which has been under water.**
- **You must operate heater with fireplace screen in place.**
- **Do not place trash, logs or other articles on the log set during operation.**
- **During manufacturing, fabricating and shipping, various components of this appliance are treated with certain oils, films or bonding agents. These bonding agents are not harmful but may produce annoying smoke and smells as they are burned off during initial operation of the appliance. This is a normal temporary occurrence. A window should be opened during the initial bake out period.**
- **Correct installation of the ceramic fiber logs, proper location of the heater and annual cleaning are necessary to avoid potential problems with sooting. Sooting, resulting from improper installation or operation, can settle on surfaces outside the fireplace. See instructions for proper installation.**
- ⚠ **WARNING: Do not allow fans to blow directly into the fireplace. Avoid any drafts that alter burner flame patterns.**
- ⚠ **WARNING: Do not use a blower insert, heat exchanger insert or other accessory not approved for use with this heater.**
- ⚠ **WARNING! This fireplace needs fresh air for ventilation to run properly. This fireplace has an ODS (oxygen depletion sensor) which will shut down the heater if adequate fresh air is not available. See troubleshooting section in the instructions.**
- ⚠ **WARNING: DO NOT operate this appliance unless all components including logs, burners, and controls are in good working condition. Never operate this appliance if any log or twig is broken, or out of their intended position. Refer to the Log set placement instructions for correct log and twig positioning.**
  **Replacement components are available through your local dealer as indicated in the How to Order Repair Parts section of the appliance manual.**
- **Keep appliance area clear and free from combustible materials, gasoline and other flammable vapors and liquids.**
- ⚠ **WARNING: Failure to keep the primary air opening(s) of the burner(s) clean may result in sooting and property damage.**

## ⚠ WARNING

**When used without adequate combustion and ventilation air, heater may give off CARBON MONOXIDE, an odorless, poisonous gas.**

**Do not install heater until all necessary provisions are made for combustion and ventilation air. Consult the written instructions provided with the heater for information concerning combustion and ventilation air. In the absence of instructions, refer to the National Fuel Gas Code, ANSI Z223.1/NFPA 54, Air for Combustion and Ventilation, or applicable local codes.**

**This heater is equipped with a PILOT LIGHT SAFETY SYSTEM designed to turn off the heater if not enough fresh air is available.**

**DO NOT TAMPER WITH PILOT LIGHT SAFETY SYSTEM!**

**If heater shuts off, do not relight until you provide fresh air.**

**If heater keeps shutting off, have it serviced. Keep burner and control compartment clean.**

**CARBON MONOXIDE POISONING MAY LEAD TO DEATH.**

**Early signs of carbon monoxide poisoning resemble the flu, with headache, dizziness and/or nausea. If you have these signs, heater may not be working properly. Get fresh air at once! Have heater serviced.**

**Some people — pregnant women, persons with heart or lung disease, anemia, those under the influence of alcohol , those at high altitudes — are more affected by carbon monoxide than others.**

**The pilot light safety system senses the depletion of oxygen at its location. If this heater is installed in a structure having a high vertical dimension, the possibility exists that the oxygen supply at the higher levels will be less than that at the heater. In this type of application, a fan to circulate the structure air will minimize this effect. The use of this fan will also improve the comfort level in the structure. When a fan is used to circulate air, it should be located so that the air flow is not directed at the burner.**

# SAFETY INFORMATION FOR USERS OF LP-GAS

**Propane (LP-Gas) is a flammable gas which can cause fires and explosions. In its natural state, propane is odorless and colorless. You may not know all the following safety precautions which can protect both you and your family from an accident. Read them carefully now, then review them point by point with the members of your household. Someday when there may not be a minute to lose, everyone's safety will depend on knowing exactly what to do. If, after reading the following information, you feel you still need more information, please contact your gas supplier.**

## LP-GAS WARNING ODOR

**If a gas leak happens, you should be able to smell the gas because of the odorant put in the LP-Gas.**
**That's your signal to go into immediate action!**

- Do not operate electric switches, light matches, use your phone. Do not do anything that could ignite the gas.
- Get everyone out of the building, vehicle, trailer, or area. Do that IMMEDIATELY.
- Close all gas tank or cylinder supply valves.
- LP-Gas is heavier than air and may settle in low areas such as basements. When you have reason to suspect a gas leak, keep out of basements and other low areas. Stay out until firefighters declare them to be safe.
- Use your neighbor's phone and call a trained LP-Gas service person and the fire department. Even though you may not continue to smell gas, do not turn on the gas again. Do not re-enter the building, vehicle, trailer, or area.
- **Finally,** let the service man and firefighters check for escaped gas. Have them air out the area before you return. Properly trained LP-Gas service people should repair the leak, then check and relight the gas appliance for you.

## NO ODOR DETECTED - ODOR FADE

**Some people cannot smell well. Some people cannot smell the odor of the chemical put into the gas. You must find out if you can smell the odorant in propane.** Smoking can decrease your ability to smell. Being around an odor for a time can affect your sensitivity or ability to detect that odor. Sometimes other odors in the area mask the gas odor. People may not smell the gas odor or their minds are on something else. Thinking about smelling a gas odor can make it easier to smell.

**The odorant in LP-gas is colorless, and it can fade under some circumstances.** For example, if there is an underground leak, the movement of the gas through soil can filter the odorant. Odorants in LP-Gas also are subject to oxidation. This fading can occur if there is rust inside the storage tank or in iron gas pipes.

The odorant in escaped gas can adsorb or absorb onto or into walls, masonry and other materials and fabrics in a room. That will take some of the odorant out of the gas, reducing its odor intensity.

LP-Gas may stratify in a closed area, and the odor intensity could vary at different levels. Since it is heavier than air, there may be more odor at lower levels. Always be sensitive to the slightest gas odor. If you detect any odor, treat it as a serious leak. Immediately go into action as instructed earlier.

## SOME POINTS TO REMEMBER

- Learn to recognize the odor of LP-gas. Your local LP-Gas Dealer can give you a "Scratch and Sniff" pamphlet. Use it to find out what the propane odor smells like. If you suspect that your LP-Gas has a weak or abnormal odor, call your LP-Gas Dealer.
- If you are not qualified, do not light pilot lights, perform service, or make adjustments to appliances on the LP-Gas system. If you are qualified, consciously think about the odor of LP-Gas prior to and while lighting pilot lights or performing service or making adjustments.
- Sometimes a basement or a closed-up house has a musty smell that can cover up the LP-Gas odor. Do not try to light pilot lights, perform service, or make adjustments in an area where the conditions are such that you may not detect the odor if there has been a leak of LP-Gas.
- Odor fade, due to oxidation by rust or adsorption on walls of new cylinders and tanks, is possible. Therefore, people should be particularly alert and careful when new tanks or cylinders are placed in service. Odor fade can occur in new tanks, or reinstalled old tanks, if they are filled and allowed to set too long before refilling. Cylinders and tanks which have been out of service for a time may develop internal rust which will cause odor fade. If such conditions are suspected to exist, a periodic sniff test of the gas is advisable. **If you have any question about the gas odor, call your LP-gas dealer. A periodic sniff test of the LP-gas is a good safety measure under any condition.**
- If, at any time, you do not smell the LP-Gas odorant and you think you should, assume you have a leak. Then take the same immediate action recommended above for the occasion when you do detect the odorized LP-Gas.
- If you experience a complete "gas out," (the container is under no vapor pressure), turn the tank valve off immediately. If the container valve is left on, the container may draw in some air through openings such as pilot light orifices. If this occurs, some new internal rusting could occur. If the valve is left open, then treat the container as a new tank. Always be sure your container is under vapor pressure by turning it off at the container before it goes completely empty or having it refilled before it is completely empty.

# IMPORTANT INSTALLATION GUIDELINES

**Proper Primary Airflow into Burner**

For proper burner operation and flame appearance, the flow of primary air into the venturi tube, located on the rear of the burner, must not be reduced. This flow of air is reduced if dirt, lint or other obstructions build-up around or inside the venturi. Any obstruction in the venturi tube area must be removed. The flow of air into the venturi is also reduced if the gas orifice isn't centered in the venturi inlet and/or is not aligned with the venturi. Any misalignment of the burner orifice may be corrected by bending the shutter cap holding the orifice to the inlet of the venturi tube.

**Ceiling Fans, Portable Fans or Logs Installed Near Cold Air Returns**

Ceiling fans or oscillating floor type fans need to be monitored during the operation of vent-free appliance. If the air blows directly into the flame causing it to disrupt the flame, it should be turned off or redirected. Ceiling fans could be reversed to possibly eliminate flame impingement, and the floor fan should be redirected. Upon installation, be aware of any cold air returns or vents in the proximity of the log set. Any draft created around a vent-free log set can cause the flame to impinge on the log and create a sooting situation.

**⚠ WARNING**

Do not allow fans to blow directly into the fireplace. Avoid any drafts that alter burner flame patterns.

**Candles**

Avoid the use of scented or decorative candles while the fireplace is in operation. Candles produce a residue in the air that creates a soot like substance. Burning candles while the log set is operating magnifies the problem. It should be noted that candles, in general, produce soot. The amount of time burned and the quantity of candles burned will determine the amount of soot produced and deposited.

**Plug-In Air Fresheners**

Avoid the use of scented air fresheners while the fireplace is in operation. Air fresheners produce a residue in the air similar to candles and may produce a soot like substance.

**Television Considerations**

Installing a television above a fireplace has become increasingly popular; however, the area above any fireplace gets hot and most TV manufacturers recommend against placing their products near a heat source.

If you install a television above this fireplace, Empire Comfort Systems accepts no responsibility for damage or injuries. Follow the television manufacturer's installation instructions, including any recommendations regarding proximity to heat sources.

If you have a TV above your fireplace, turn off the fireplace and let it cool completely before servicing or touching any buttons on the TV.

# INTRODUCTION

**Instructions to Installer**

1. Installer must leave instruction manual with owner after installation.
2. Installer must have owner fill out and mail warranty card supplied with unvented room heater.
3. Installer should show owner how to start and operate unvented room heater.

Always consult your local Building Department regarding regulations, codes or ordinances which apply to the installation of an unvented room heater.

This appliance may be installed in an aftermarket* manufactured (mobile) home, where not prohibited by state or local codes.

*Aftermarket: Completion of sale, not for purpose of resale, from the manufacturer.

This appliance is only for use with the type of gas indicated on the rating plate. This appliance is not convertible for use with other gases.

**⚠ WARNING**

ANY CHANGE TO THIS HEATER OR ITS CONTROLS CAN BE DANGEROUS.
**Improper installation or use of the heater can cause serious injury or death from fire, burns, explosion or carbon monoxide poisoning.**

This series is design certified in accordance with American National Standard Z21.11.2 by the Canadian Standards Association Laboratories as an Unvented Room Heater and should be installed according to these instructions.

**Any alteration of the original design, installed other than as shown in these instructions or use with a type of gas not shown on the rating plate is the responsibility of the person and company making the change.**

**Millivolt 3 Series Only**
**750 Millivolt System**
When you ignite the pilot, the thermocouple produces millivolts (electrical current) which energizes the magnet in the gas valve. After 30 seconds to 1 minute time period you can release the gas control knob and the pilot will stay ON. Allow your pilot flame to operate an additional one (1) to two (2) minutes before you turn the gas control knob from the PILOT position to the ON position. This time period allows the millivolts (electrical energy) to build-up to a sufficient level allowing the gas control to operate properly.

**Important**
All correspondence should refer to complete Model Number, Serial Number and type of gas.

***Notice:*** During initial firing of this unit, its paint will bake out, and smoke will occur. To prevent triggering of smoke alarms, ventilate the room in which the unit is installed.

**Installation on Rugs and Tile**
If this appliance is installed directly on carpeting, tile or other combustible material other than wood flooring the appliance shall be installed on a metal or wood panel extending the full width and depth of the appliance.

The base referred to above does not mean the fire-proof base as used on wood stoves. The protection is for rugs that are extremely thick and light colored tile.

Solid-fuels shall not be burned in a masonry or *UL 127* factory-built fireplace in which an unvented room heater is installed.

**Qualified Installing Agency**
Installation and replacement of gas piping, gas utilization equipment or accessories and repair and servicing of equipment shall be performed only by a qualified agency. The term "qualified agency" means any individual, firm, corporation or company which either in person or through a representative is engaged in and is responsible for (a) the installation or replacement of gas piping or (b) the connection, installation, repair or servicing of equipment, who is experienced in such work, familiar with all precautions required and has complied with all the requirements of the authority having jurisdiction.

State of Massachusetts: The installation must be made by a licensed plumber or gas fitter in the Commonwealth of Massachusetts.

Sellers of unvented propane or natural gas-fired supplemental room heaters shall provide to each purchaser a copy of 527 CMR 30 upon sale of the unit.

In the Sate of Massachusetts, unvented propane and natural gas-fired space heaters shall be prohibited in bedrooms and bathrooms.

The installation must conform with local codes or, in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.1.*

**Available from the American National Standards Institute, Inc.*

*1430 Broadway, New York, N.Y. 10018.*

**High Altitudes**
For altitudes/elevations above 2,000 feet (610m), ratings should be reduced at the rate of 4 percent for each 1,000 feet (305m) above sea level. Contact the manufacturer or your gas company before changing spud/orifice size.

**Well Head Gas Installations**
Some natural gas utilities use "well head" gas. This may affect the Btu output of the unit. Contact the gas company for the heating value. Contact the manufacturer or your gas company before changing spud/orifice size.

**⚠ WARNING**

This appliance is equipped for (natural gas or propane) gas. Field conversion is not permitted.

# ACCESSORIES

| Accessories for VFL(L,Z)48SP30 (Millivolt) Models | |
|---|---|
| **Remote Control Accessories** | **Description** |
| FRBTC | Battery Operated Remote Control with Thermostat |
| FRBTP | Battery Operated Programmable Remote Control |
| TRW | Remote Wall Thermostat (Wireless) |

| OPTIONAL ACCESSORIES | |
|---|---|
| **Part Number** | **Description** |
| DF48WHP | Decorative Front, Tidewater - Pewter |
| DF48WBL | Decorative Front, Tidewater - Black |
| DF484BL | Decorative Front, 4" Surround - Black |
| DG1AB | Decorative Glass Droplets - 1/2" Aqua Blue (One kit per one square foot) |
| DG1GC | Decorative Glass Droplets - 1/2" Glacier (One kit per one square foot) |
| DG1SL | Decorative Glass Droplets - 1/2" Sangria (One kit per one square foot) |
| DG1NXS | Decorative Glass Droplets - 1" Onyx Solid (One kit per one square foot) |
| DG1RYC | Decorative Glass Droplets - 1" Ruby Clear (One kit per one square foot) |
| DG1TZC | Decorative Glass Droplets - 1" Topaz Clear (One kit per one square foot) |
| DG1BKP | Decorative Glass, Crushed - 1/4" Black (One kit per one square foot) |
| DG1BUC | Decorative Glass, Crushed - 1/4" Blue (One kit per one square foot) |
| DG1CLF | Decorative Glass, Crushed - 1/4" Clear (One kit per one square foot) |
| DR1FMA | Decorative Rock, Ceramic Fiber - Medium (One kit per one square foot) |
| DRFPA | Decorative Rock, Ceramic Fiber - Pebble (One kit per 1/2 square foot) |
| LK5 | 120V Lighting Kit - Requires Switch or Rheostat |

**Note:** The total burner cover area for decorative glass or rocks equals 2.75 square feet for VFLL48SP, and 3.00 square feet for VFLZ48SP.

**Note:** Never place decorative glass or rocks on or next to the burner. Decorative glass or rocks should not be higher than the lip of the burner cover.

**Note:** The See-Thru fireplace has an opening on both sides and two decorative fronts may be desired.

**Note:** Decorative fronts do not cover the entire face of the fireplace. The installer must finish the wall as shown in Figure 18a on page 13.

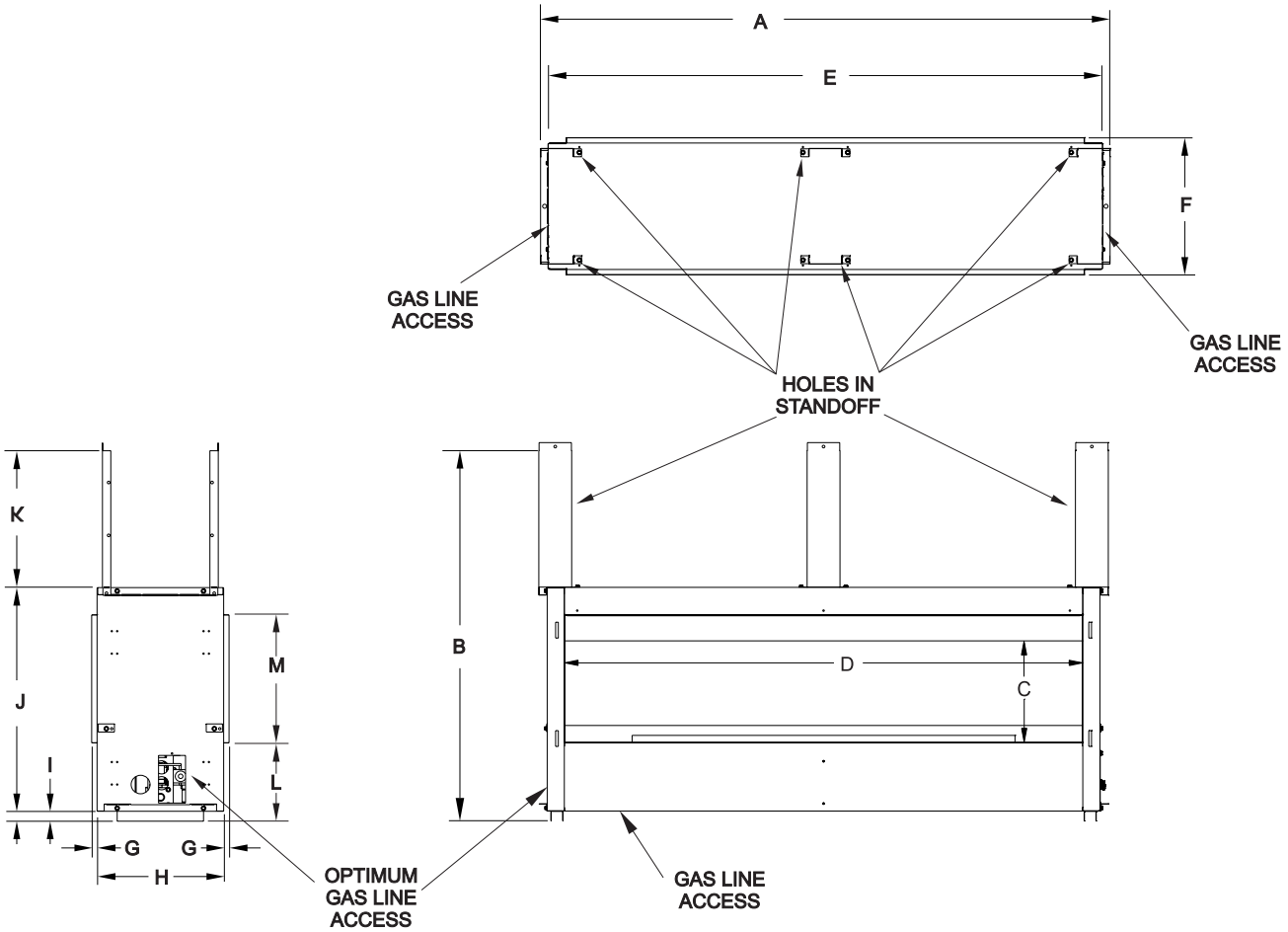
# SPECIFICATIONS

| | VFLL48SP(30,90)L | | VFLZ48SP(30,90)L | |
|---|---|---|---|---|
| | **LP** | **NAT** | **LP** | **NAT** |
| Input Btu/hr Maximum | 40,000 | 40,000 | 40,000 | 40,000 |
| Input Btu/hr Minimum | 31,000 | 28,000 | 31,000 | 28,000 |
| Orifice | #49 | 3.00 mm | #49 | 3.00 mm |
| Air Shutter Opening | FULL OPEN | 1/8" | 3/8" | 1/16" |
| Recommended Manifold Pressure | 10" w.c. | 3.5" w.c. | 10" w.c. | 3.5" w.c. |

# FIREPLACE DIMENSIONS

When planning a fireplace insert installation, it's necessary to determine:

- Gas supply piping (left side entrance).
- Electrical connections - for optional light kit
- Electrical supply requirements for optional light. (120V, 60Hz, 1 Amp) (right side entrance)
- Proper opening size of fireplace required for installation of the fireplace insert.




| VF FIREPLACE DIMENSIONS (in inches) | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MODEL | A | B | C | D | E | F | G | H | I | J | K | L | M |
| VFL(L,Z)48SP | 52-3/4 | 35 | 12-1/16 | 48 | 51-3/8 | 12-11/16 | 1/2 | 11-13/16 | 15/16 | 21-1/8 | 13 | 7-7/16 | 12-1/8 |

**Figure 1**

In planning the installation for the fireplace, determine where the unit is to be installed and whether optional accessories are desired. Gas supply piping should also be planned at this time.

The fireplace can be mounted on any of these surfaces:

1. A flat hard combustible or non-combustible surface.
2. A raised platform of combustible or non-combustible material.
3. Four corners of the fireplace so contact is made on all four perimeter edges on the bottom of the unit.

If the fireplace is installed directly on carpeting, tile or other combustible material other than wood flooring, it should be installed on a metal or wood panel extending the full width and depth of the unit.

This unit is designed to be installed in a zero-clearance enclosure. This means the combustible material can come in contact with the top and side standoff spacers, and secured to combustible framing using the framing brackets provided.

# UNPACKING THE FIREPLACE

1. Cut binding straps and shrink wrap.
2. Remove top of carton.
3. Remove glass cartons from back of unit and set aside.
4. Remove non-combustible boards and set aside.
5. Remove remaining carton.
6. Verify that the fireplace and components have not been damaged during shipping.
7. Set fireplace in a location near to its final installation location.

# BRACKET & STANDOFF INSTALLATION

**NOTE: You must use the standoffs that are supplied with the fireplace. The standoffs are shipped in a flat-state on top of the fireplace.**

1. Locate the six steel standoffs under the burner cover. **See Figure 2.**

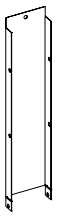


**Figure 2 - Standoff**

2. The standoffs have a perforation located on each end. Bend them at the perforation as shown in Figure 3.

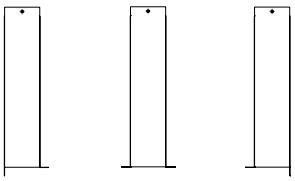


**Figure 3 - Standoff Forming**

4. Secure the standoffs to the fireplace top with eight screws as shown in **Figure 4.** The screws are located in the hardware packet inside the envelope pack. There are holes located in the top of the fireplace for each top standoff. The hole closer to the edge of the fireplace is for mounting non-combustible board around the opening. The other holes is for mounting the non-combustible board to the fireplace face (top, sides and bottom). **See Figures 4 and 6.**

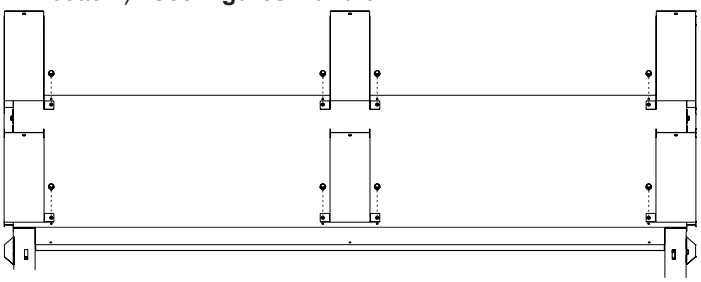
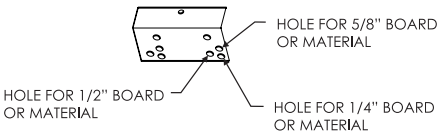


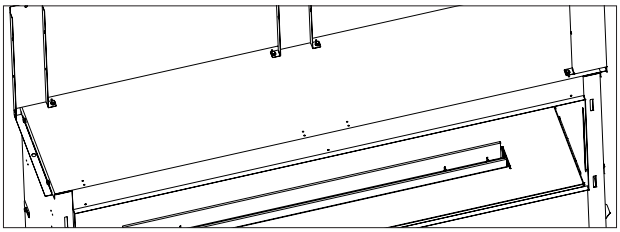
**Figure 4 - Top of Cabinet**

5. On the top and bottom of each side are side framing standoffs. Use pliers to bend the side framing standoffs at the perforations 90 degrees away from the cabinet. Once bent, this will leave a 1/2" standoff dimension. **See Figure 7.**
6. Locate framing brackets in the envelope. The holes in the framing brackets allow different size boards and different locations for the boards. **See Figure 5.** Install eight framing brackets with two 10 x 1/2 screws (each). **See Figures 7 and 8.** Use the front set of holes if mounting around fireplace window. Use the back set of holes if mounting around the fireplace face (top, sides and bottom). **See Figure 6.**




Note: The non-combustible board provided is 1/2" thick.

**Figure 5 - Nailing Flange**



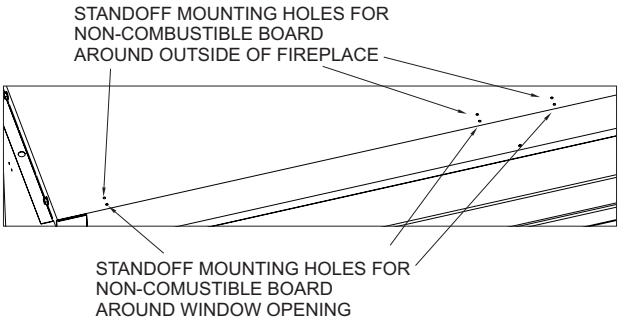
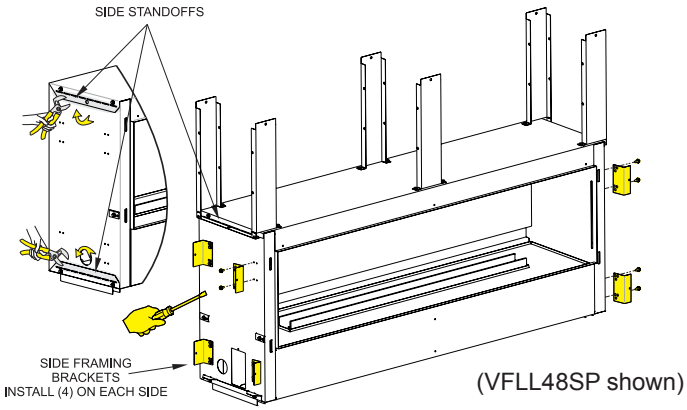

STANDOFF MOUNTING HOLES FOR NON-COMBUSTIBLE BOARD AROUND OUTSIDE OF FIREPLACE
STANDOFF MOUNTING HOLES FOR NON-COMUSTIBLE BOARD AROUND WINDOW OPENING

**Figure 6 - Top of Cabinet**




**Note:** Bend the side standoffs at the perforations as stated in Step 5.

**Figure 7**

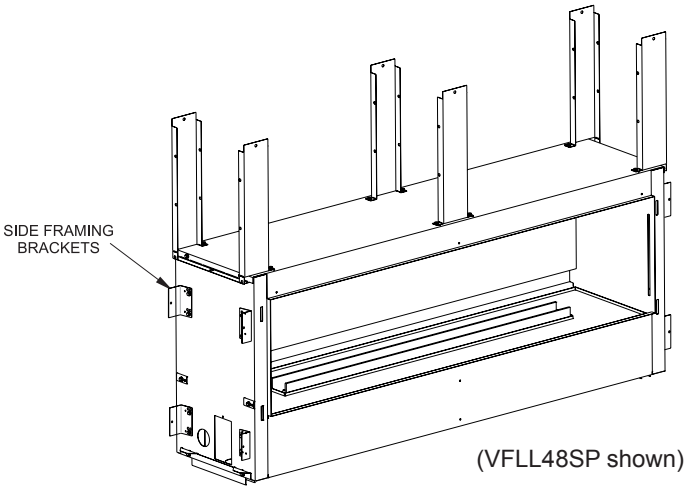



**Figure 8**

**Note:** Additional screws made be used with the side framing brackets to give additional support.

# JUNCTION BOX WIRING INSTALLATION

**CAUTION: ALL WIRING SHOULD BE DONE BY A QUALIFIED ELECTRICIAN AND SHALL BE IN COMPLIANCE WITH ALL LOCAL, CITY AND STATE BUILDING CODES. BEFORE MAKING THE ELECTRICAL CONNECTION, MAKE SURE THAT MAIN POWER SUPPLY IS DISCONNECTED. THE APPLIANCE, WHEN INSTALLED, MUST BE ELECTRICALLY GROUNDED IN ACCORDANCE WITH LOCAL CODES OR, IN THE ABSENCE OF LOCAL CODES, WITH THE NATIONAL ELECTRICAL CODE ANSI/NFPA 70 (LATEST EDITION).**

JUNCTION BOX CONNECTIONS

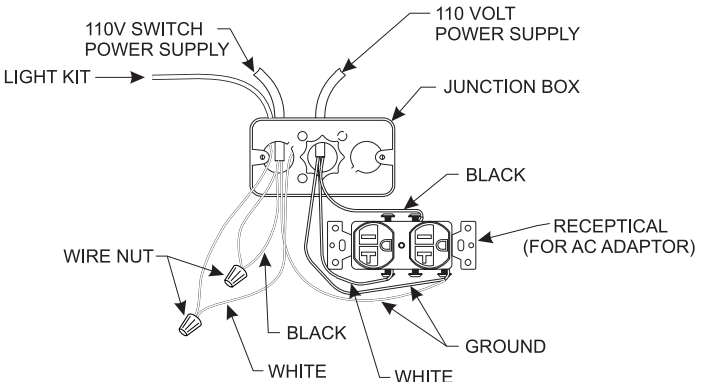



**Figure 9**

A factory installed junction box is located at the lower right corner inside the firebox bottom cavity. Wiring must be fed to the junction box through the outer wrap of the fireplace, then connected as required inside the junction box as directed above. Refer to the instructions above to determine what wiring is needed depending on what valve system you have, and whether or not the optional Accent Light kit will be installed.

It is recommended that approximately 6" of wiring be left in the junction box to allow for connections. For wiring detail, refer to **Figure 9.**

**JUNCTION BOX WIRING INSTALLATION**

**120 Volt electrical requirements will depend on which model fireplace is installed.**

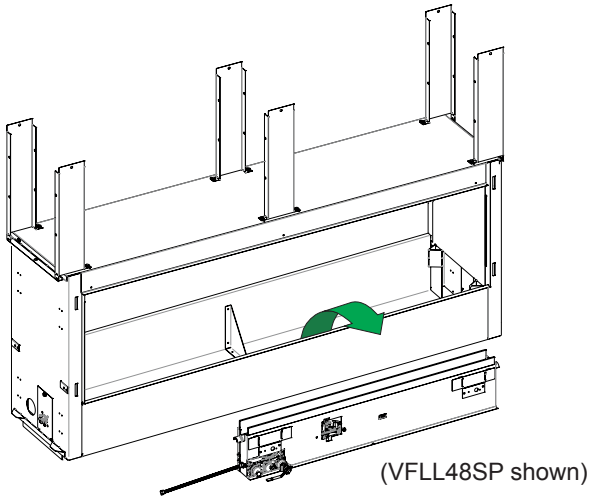
**For VFL(L,Z)48SP30L series millivolt operated system:** Wiring is only needed if adding the LK5 Accent Light accessory. Follow the wiring instructions included with the LK5 to connect this optional accessory through the junction box to a wall switch.

**For VFL(L,Z)48SP90L series "IP" operated system:** The suggested 120V electrical requirements include installation of the electrical receptacle into the junction box located at the lower right corner inside the firebox bottom cavity. This will be used to plug in the AC/DC Adapter that provides power to the electronic valve system.

**Note:** If an LK5 Accent Light kit is to be installed, a separate 120V line will be needed to connect the light kit wiring directly to a wall switch. **See Figure 9.**

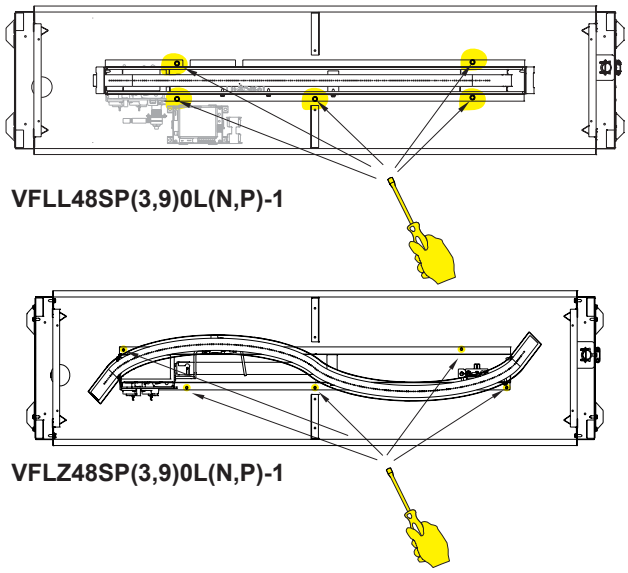
It is recommended to move the fireplace to its final location or near it before installing electrical wire or connecting gas lines.

1. To access and install the junction box and wiring, begin by removing the burner cover. Lift it straight up off of the burner and set aside. **See Figure 10.** For VFLL48SP90 Units: Remove the heat shield and disconnect the wire to the switch on the heat shield.
2. Remove the five 5/16" Hex screws that hold down the complete burner and valve assembly. There are three screws on the front bottom flange, and two on the back bottom flange, near the ends. **See Figure 11.**



(VFLL48SP shown)

**Figure 10**



**VFLL48SP(3,9)0L(N,P)-1**

**VFLZ48SP(3,9)0L(N,P)-1**

**Figure 11**

# JUNCTION BOX WIRING INSTALLATION

3. Lift the complete burner and valve assembly upward, then turn it sideways in fireplace opening to gain easy access to the junction box. You may remove the complete burner and valve assembly as shown in **Figure 12.**

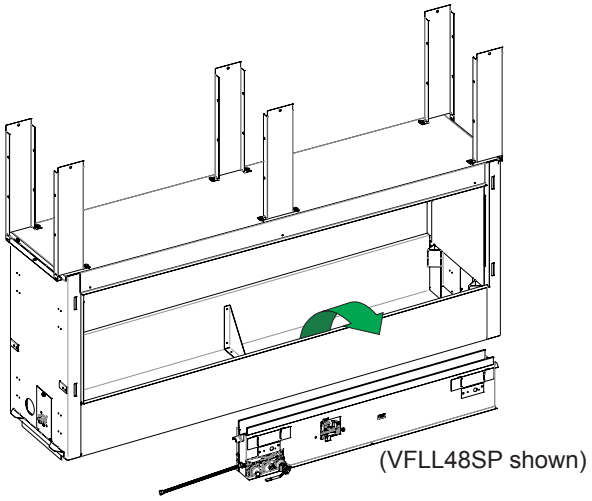



**Figure 12**

4 The junction box is located on the end of the fireplace. Remove the 5/16" Hex screw that secures the junction box to the firebox, and remove the junction box. **See Figure 13.** Run romex wire through the right rear corner of the fireplace and into the firebox area. Secure wiring with the romex connector as required and install the duplex receptacle as shown in **Figure 14**. Attach the black wire to the brass screw side of the receptacle, and the white wire to the opposite side. Secure the incoming ground wire under the green ground screw provided on the receptacle.

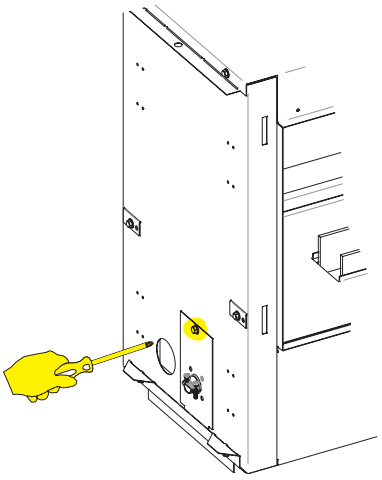


**Figure 13**

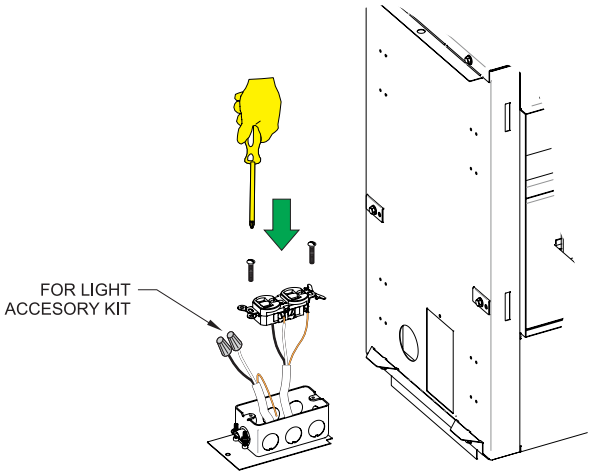



**Figure 14**

5. If only installing the LK5 Accent Light kit, then remove the 7/8" diameter knockout in the side of the junction box, install the 7/8" diameter protective grommet, and connect the wiring with wire nuts as shown in **Figure 14.**

   **There is a solid junction box cover plate included with the LK5 kit that should be used on the junction box if a duplex receptacle is not used.**

6. Once the junction box wiring is completed, re-install the junction box into the lower right corner of the firebox cavity using the screws removed in step 4 as shown in **Figure 15.**

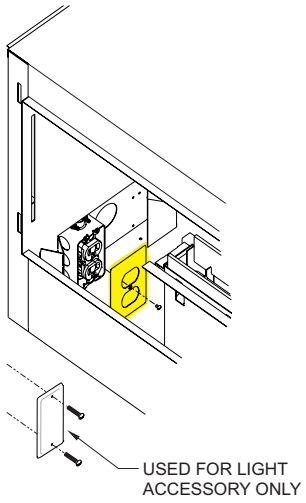



**Figure 15**

7. Reinstall the burner and valve assembly and reattach the screws removed in step 2. **See Figure 11.**

8. For VFL(L,Z)48SP90: Reconnect the wire from the switch on the heat shield and put the shield back in place.

# GAS SUPPLY

The gas pipeline can be brought in through the right or left side of the appliance. The insert has a Flexline with shutoff valve located on the left side when facing the unit. **See Figures 16 and 17.** Consult the current National Fuel Gas Code, ANSI Z223.1 CAN/CGA-B149 (.1 or .2) installation code.

| Recommended Gas Pipe Diameter | | | | |
|---|---|---|---|---|
| **Pipe Length** | **Schedule 40 Pipe Inside Diameter** | | **Tubing, Type L Outside Diameter** | |
| | Nat. | L.P. | Nat. | L.P. |
| 0-10ft<br>0-3m | 1/2"<br>12.7mm | 3/8"<br>9.5mm | 1/2"<br>12.7mm | 3/8"<br>9.5mm |
| 11-40ft<br>4-12m | 1/2"<br>12.7mm | 1/2"<br>12.7mm | 5/8"<br>15.9mm | 1/2"<br>12.7mm |
| 41-100ft<br>13-30m | 1/2"<br>12.7mm | 1/2"<br>12.7mm | 3/4"<br>19mm | 1/2"<br>12.7mm |
| 101-150ft<br>31-46m | 3/4"<br>19mm | 1/2"<br>12.7mm | 7/8"<br>22.2mm | 3/4"<br>1.9 mm |

***Caution*:** Never use plastic pipe. Check to confirm whether your local codes allow copper tubing or galvanized.

***Notice*:** Since some municipalities have additional local codes, it is always best to consult your local authority and installation code. The use of the following gas connectors is recommended:

— ANS Z21.24 Appliance Connectors of Corrugated Metal Tubing and Fittings.

— ANS Z21.45 Assembled Flexible Appliance Connectors of Other Than All-Metal Construction

The above connectors may be used if acceptable by the authority having jurisdiction. The state of Massachusetts requires that a flexible appliance connector cannot exceed three feet in length.

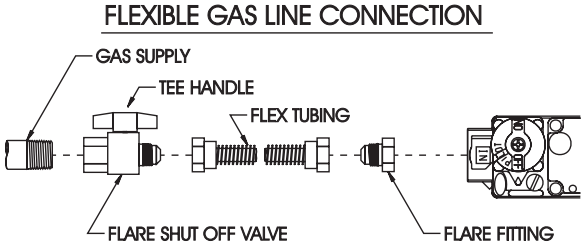



**Figure 16**

**Installing the Main Gas Cock**

Each appliance should have its own manual gas cock.

A manual main gas cock should be located in the vicinity of the unit and can be easily accessed after assembly. Where none exists, or where its size or location is not adequate, contact your local authorized installer for installation or relocation.

Compounds used on threaded joints of gas piping shall be resistant to the action of liquefied petroleum gases. The gas lines must be checked for leaks by the installer. This should be done with a soap solution watching for bubbles on all exposed connections, and if unexposed, a pressure test should be made.

**Never use an exposed flame to check for leaks. Appliance must be disconnected from piping at inlet of control valve and pipe capped or plugged for pressure test. Never pressure test with appliance connected; control valve will sustain damage!**

***Notice*:** The millivolt gas controls are equipped with a captured screw type pressure test point, therefore it is not necessary to provide a 1/8" test point up stream of the control.

When using copper or flex connector use only approved fittings.

The appliance and it's individual shut off valve must be disconnected from supply piping system during any pressure testing of that system at test pressures in excess of 1/2 psig (3.5kPa).

The appliance must be isolated from the gas supply piping system by closing its individual manual shut off valve during any pressure testing of the gas supply piping system at test pressures equal to or less than 1/2 psig (3.5kPa).

**Attention!** If one of the procedures results in pressures in excess of 1/2 psig (14" w.c.) (3.5 kPa) on the fireplace gas valve, it will result in a hazardous condition.

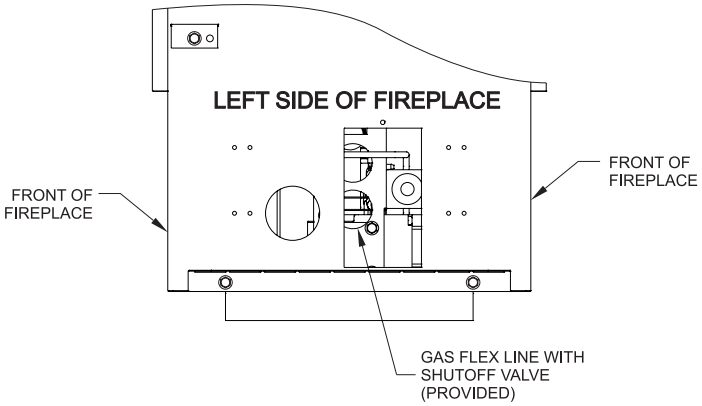



**Figure 17**

Shut off valve must be accessible after installation.

**Checking Manifold Pressure**

**MILLIVOLT VALVES (VFL(L,Z)48SP30)**

**Natural gas** will have a manifold pressure of approximately 3.5" w.c. for maximum input or 1.6" w.c. for minimum input at the pressure regulator outlet with the inlet pressure to the pressure regulator from a minimum of 4.5" w.c. for the purpose of input adjustment to a maximum of 10.5" w.c.

**Propane gas** will have a manifold pressure approximately 10.0"w.c. (2.49kPa) for maximum input or 6.3"w.c. for minimum input at the pressure regulator outlet with the inlet pressure to the pressure regulator from a minimum of 11.0"w.c. for the purpose of input adjustment to a maximum of 13.0"w.c.

**INTERMITTENT PILOT VALVES (VFL(L,Z)48SP90)**

**Natural gas** will have a manifold pressure of approximately 3.5" w.c. at the pressure regulator outlet with the inlet pressure to the pressure regulator from a minimum of 7.0" w.c. for the purpose of input adjustment to a maximum of 10.5" w.c.

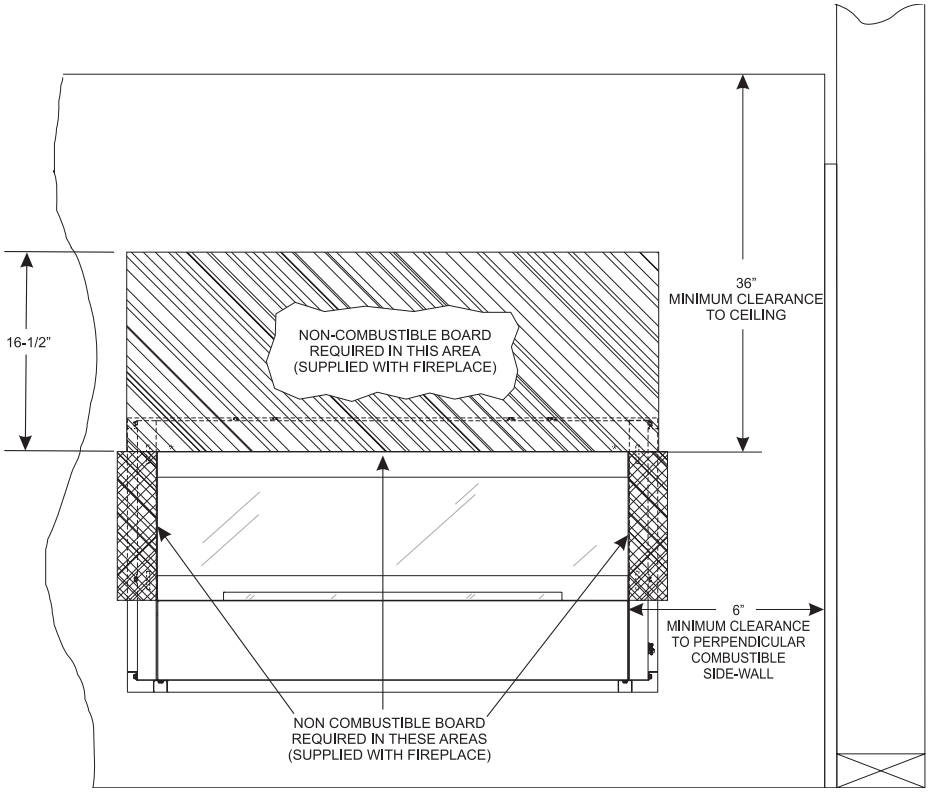
**Propane gas** will have a manifold pressure approximately 10.0"w.c. at the pressure regulator outlet with the inlet pressure to the pressure regulator from a minimum of 11.0"w.c. for the purpose of input adjustment to a maximum of 13.0"w.c.

A test gage connection is located downstream of the gas appliance pressure regulator for measuring gas pressure. The connection is a 1/8 inch N.P.T. plugged tapping.

**Millivolt Control Valve**

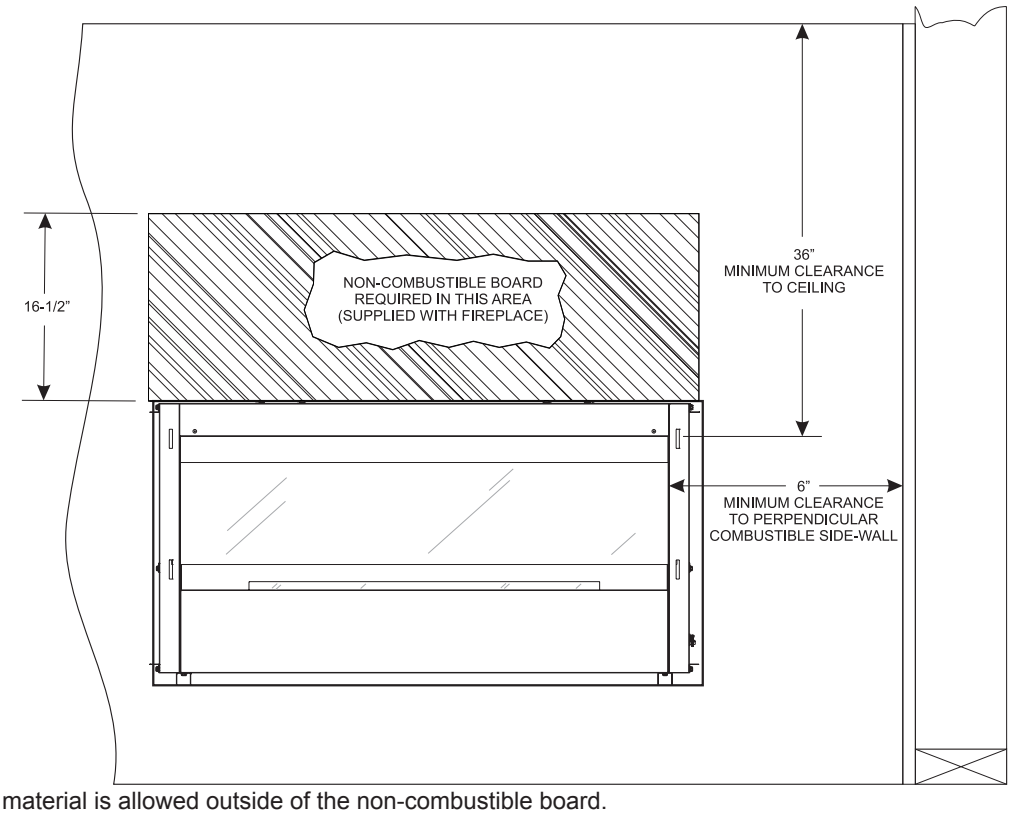
The valve regulator controls the burner pressure which should be checked at the pressure test point. Turn captured screw counter clockwise 2 or 3 turns and then place tubing to pressure gauge over test point (Use test point "A" closest to control knob). **See Figure 41.** After taking pressure reading, **be sure and turn captured screw clockwise firmly to re-seal.** Do not over torque. Check for gas leaks.

# CLEARANCES




**Note:** Combustible material is allowed below a fireplace viewing area opening and outside the non-combustible board indicated area.
**Note:** To finish the wall using DF(38,48)4BL Decorative Front, stop finishing materials 2-7/8 inches above the fireplace upper opening and 2-3/8 inches below the lower opening. This will allow 3/8 inch space for lifting the front to unhook and remove it. The optional front will overlap the finish materials.

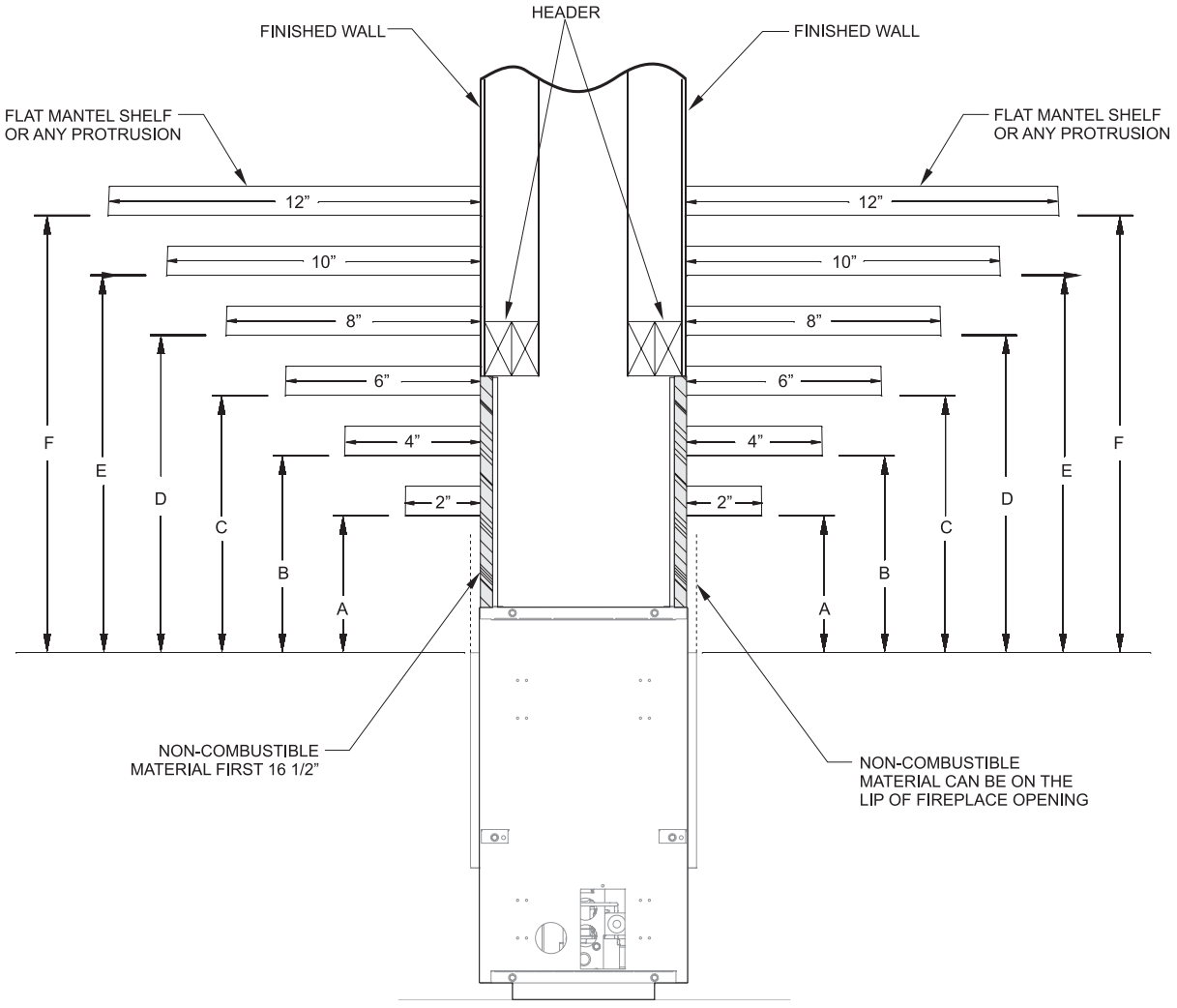
**Figure 18a**




**Note:** Combustible material is allowed outside of the non-combustible board.

**Figure 18b**

# CLEARANCES




| DIMENSION (IN INCHES) | | | | | | |
|---|---|---|---|---|---|---|
| **MODEL** | **A** | **B** | **C** | **D** | **E** | **F** |
| **VFL(L,Z)48** | 21 | 23 | 25 | 27 | 29 | 31 |

**Figure 19**

**Television Considerations**

Installing a television above a fireplace has become increasingly popular; however, the area above any fireplace gets hot and most TV manufacturers recommend against placing their products near a heat source.

If you install a television above this fireplace, Empire Comfort Systems accepts no responsibility for damage or injuries. Follow the television manufacturer’s installation instructions, including any recommendations regarding proximity to heat sources.

If you have a TV above your fireplace, turn off the fireplace and let it cool completely before servicing or touching any buttons on the TV.

# FIREPLACE INSTALLATION

**Wall Thermostat Considerations**

For optimal performance, the thermostat should be installed in the room with the appliance and the highest ceiling.

**Built-In Fireplace Installation**

Built-in installation of this fireplace involves installing the fireplace into a framed-in enclosure. This makes the front of the fireplace flush with a wall or the front of the fireplace window flush with a wall.

Frame in rough opening. Use dimensions shown in **Figure 21** for a conventional rough opening. Use **Figure 22** for an elevated installation. Be sure to provide support to the bottom of the fireplace. Be sure to provide gas line for fireplace and electrical power for optional light assembly. Refer to Junction Box Wiring section on pages 10 and 11 for details on electrical requirements.

1. Verify gas and electrical lines are ready for fireplace installation. See "Gas Supply" page 12. See "Junction Box" pages 10 and 11. If no electrical power is to be used, place a solid cover (provided) over the junction box opening. See Junction Box Wiring section in this manual.
2. Insert fireplace into enclosure.
3. Level firebox.
4. Secure six framing brackets with drywall screws to the framed opening above the fireplace as shown in **Figures 20 to 22.** Top brackets should be installed to support the ends of the non-combustible board. Note: The drywall screws are located in the instruction envelope packet. Secure the left and right standoffs to the side framing as shown in Figure 20. Secure the fireplace on the left and right through the framing brackets.

5a. To install the fireplace cabinet face flush with the wall-board, secure the framing brackets at the top and sides of the fireplace with a 1/2" setback. This allows you to use the supplied non-combustible board above the fireplace. Note: This type of installation will allow you to apply tile, marble, stone or other non-combustible material over the face of the fireplace cabinet, up to the flange opening. **See Figure 18b.** Note: Decorative fronts do not cover the entire face of the unit.

**Note: Decorative fronts do not cover the entire face of the fireplace. The installer must finish the wall as shown in Figure 18a on page 13.**

5b. To install the fireplace so that non-combustible board is installed over the fireplace cabinet face (up to the opening window), secure the top and side framing brackets flush with the face of the fireplace cabinet. Note: With this option additional non-combustible materials will be needed to extend over the face of the fireplace cabinet, above and beside the flanged opening. Non-combustible board has been sent with the unit. Attach these pieces to the face of the unit with high temperature silicone adhesive or with screws. If putting screws into the face of the unit, avoid the area around the outer glass. **See Figure 18a.**

***Notice for Finishing Materials***

The wall above the fireplace will become hot. Install the non-combustible board supplied with the fireplace before adding paint, tile or stone. Attach tile or other non-combustible products to the fireplace face and to the non-combustible area (Figures 18a and 18b) using adhesives designed for high-temperature applications. Follow the manufacturer's instructions for application and curing times. Heat from the fireplace may cause incorrectly installed materials to fail. If you are painting above the fireplace, use a coating designed for high temperature environments and follow the manufacturer's instructions for surface prep, application and curing. Heat from the fireplace may cause incorrectly applied coatings to fail or discolor.

6. Check gas lines for leaks.
7. For VFL(L,Z)48SP90 plug power adapter to junction box.
8. Place batteries in receiver boxes and remotes using instructions provided. Verify remotes are communicating with receivers.
9. Install optional liners using their instructions.

10a. For VF(L,Z)48SP30 fireplaces: Connect the remote receiver to the valve as indicated in the instructions included with the remote and receiver. Light the pilot (see page 23) and turn the valve to the "ON" position. Set "Hi" or "Lo" for flame height as desired. The fireplace will not light the burner until the remote's "ON" button is pressed.

10b. For VF(L,Z)48SP90 fireplaces, set receiver for "remote". See page 30. Set switch on heat shield to standing pilot or intermediate pilot. **See Figure 61.** Verify that the heat shield is back in place. **See Figure 10.**

11. Replace burner cover. **See Figure 10.**
12. Retrieve shorter glass and install on both sides of burner. **See Figure 20.**
13. Place optional decorative glass or rocks according to their instruction. **See Figure 33. Glass and rock must not be placed on top of or next to burner.**
14. Retrieve larger glass panel and install in slots on the left and right of fireplace. **See Figures 34 - 36.**
15. Install optional decorative surround panel assembly. Refer to instructions included with the surround panel kit.
16. Test fireplace using remote and show owner how to use the remote. Show owner lighting instructions in this manual.
17. Installation of built-in fireplace is complete. Leave this manual with the owner.

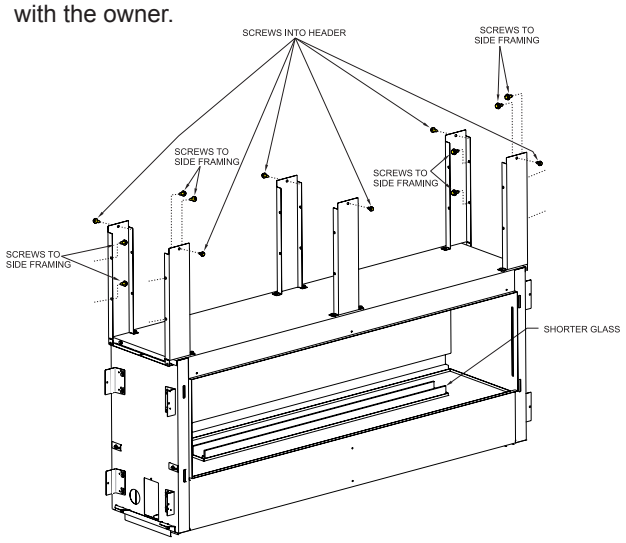



**Figure 20**

# FIREPLACE INSTALLATION

**Rough Opening for Installing in Wall (Built-In)**

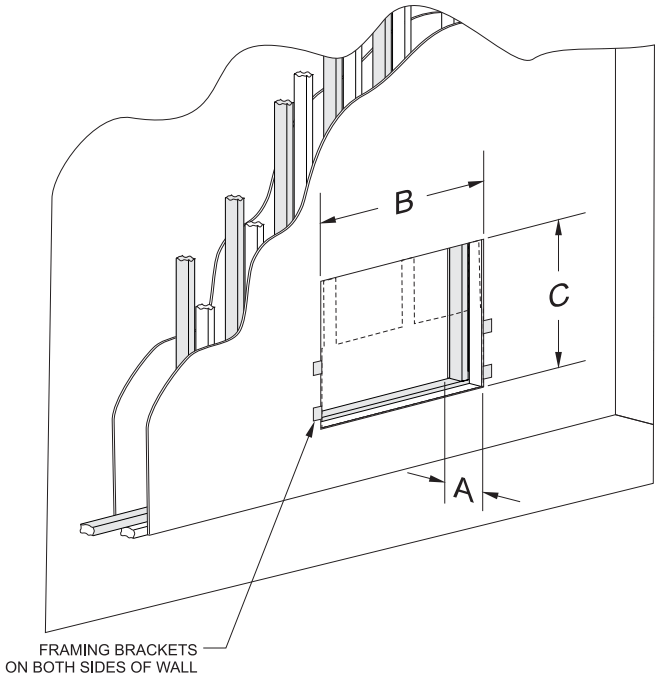



**Figure 21**

**Rough Opening for Elevated Installation (Built-In)**

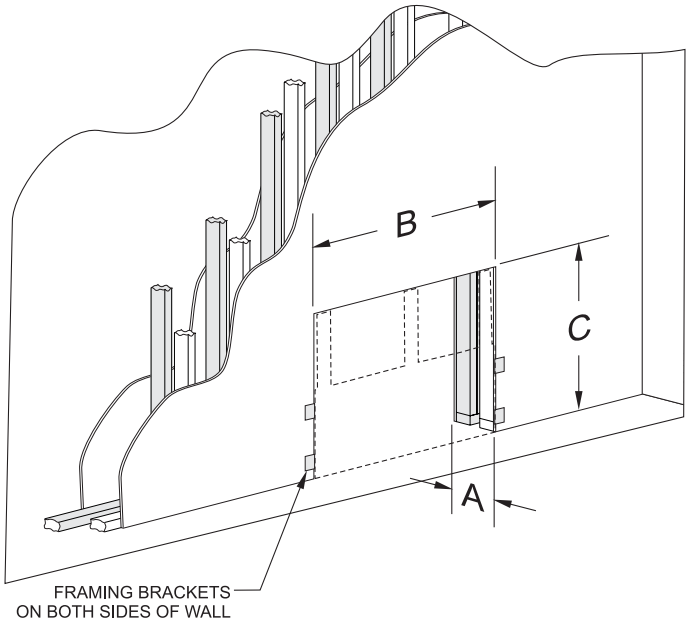



**Figure 22**

| TABLE 1 - MINIMUM DIMENSIONS (in inches) FOR FIGURES 21 & 22 | | | | | |
|---|---|---|---|---|---|
| A | B | C | D | E | F |
| 12-13/16* | 53 | 35-1/4 | 53-1/2 | 75-5/8 | 37-7/8 |

*Minimum clearance with 1/2-in. non-combustible board over both faces of fireplace. If non-combustible board is to top of fireplace, reduce depth by 1/2-in. for each side.

# WATER VAPOR: A BY-PRODUCT OF UNVENTED ROOM HEATERS

Water vapor is a by-product of gas combustion. An unvented room heater produces approximately one (1) ounce (30ml) of water for every 1,000 BTU's (.3KW's) of gas input per hour.

Unvented room heaters are recommended as supplemental heat (a room) rather than a primary heat source (an entire house). In most supplemental heat applications, the water vapor does not create a problem. In most applications, the water vapor enhances the low humidity atmosphere experienced during cold weather.

The following steps will help insure that water vapor does not become a problem.

1. Be sure the heater is sized properly for the application, including ample combustion air and circulation air.
2. If high humidity is experienced, a dehumidifier may be used to help lower the water vapor content of the air.
3. Do not use an unvented room heater as the primary heat source.

# PROVISIONS FOR ADEQUATE COMBUSTION & VENTILATION AIR

This heater shall not be installed in a confined space or unusually tight construction unless provisions are provided for adequate combustion and ventilation air.

**Installation in a Confined Space**

A confined space is an area with volume less than 50 cubic feet per 1,000 Btuh of the combined input rates of all appliances drawing combustion air from that space. Small areas such as equipment rooms are confined spaces. Furnaces installed in a confined space which supply heated air to areas outside the space must draw return air from outside the space through tightly sealed return air ducts. A confined space must have 2 openings into the space for combustion air. One opening must be within 12 inches of the ceiling and the other must be within 12 inches of the floor. The required sizing of these openings is determined by whether inside or outside air is used to support combustion, the method by which the air is brought to the space (vertical or horizontal duct) and by the total input rate of all appliances in the space.

**Unusually Tight Construction**

The air that leaks around doors and windows may provide enough fresh air for combustion and ventilation. However, in buildings of unusually tight construction, you must provide additional fresh air.

**Unusually tight construction is defined as construction where:**

a. Walls and ceilings exposed to the outside atmosphere have a continuous water vapor retarder with a rating of one perm or less with openings gasketed or sealed, and
b. Weather-stripping has been added on openable windows and doors, and
c. Caulking or sealants are applied to areas such as joints around window and door frames, between sole plates and floors, between wall-ceiling joints, between wall panels, at penetrations for plumbing, electrical, and gas lines, and at other openings.

If your home meets all of the three criteria above, you must provide additional fresh air. See **"Ventilation Air From Outdoors,"** page 18.

**Determining if You Have a Confined or Unconfined Space**

Use this worksheet to determine if you have a confined or unconfined space.

**Space:** Includes the room in which you will install heater plus any adjoining rooms with doorless passageways or ventilation grills between the rooms.

1. Determine the volume of the space (length x width x height).
   Length x Width x Height = _____ cu. ft. (volume of space)
   *Example:* Space size 16 ft. (length) x 10 ft. (width) x 8 ft. (ceiling height) = 1,280 cu. ft. (volume of space)
   If additional ventilation to adjoining room is supplied with grills or openings, add the volume of these rooms to the total volume of the space.
2. Divide the space volume by 50 cubic feet to determine the maximum BTU/Hr the space can support.
   _____ (volume of space) ÷ 50 cu. ft. = (maximum BTU/Hr the space can support)
   *Example:* 1,280 cu. ft. (volume of space) ÷ 50 cu. ft. = 25.6 or 25,600 (maximum BTU/Hr the space can support)
3. Add the BTU/Hr of all fuel burning appliances in the space.

| | | |
|---|---|---|
| Vent-free heater | | _____ BTU/Hr |
| Gas water heater | | _____ BTU/Hr |
| Gas furnace | | _____ BTU/Hr |
| Vented gas heater | | _____ BTU/Hr |
| Gas fireplace logs | | _____ BTU/Hr |
| Other gas appliances* | + | _____ BTU/Hr |
| Total | = | _____ BTU/Hr |

| | | | |
|---|---|---|---|
| *Example:* Vented gas heater | | 20,000 | BTU/Hr |
| Vent-free heater | + | 18,000 | BTU/Hr |
| Total | = | 38,000 | BTU/Hr |

*Do not include direct-vent gas appliances. Direct vent draws combustion air from the outdoors and vents to the outdoors.

4. Compare the maximum BTU/Hr the space can support with the actual amount of BTU/Hr used.
   _____ BTU/Hr (maximum the space can support)
   _____ BTU/Hr (actual amount of BTU/Hr used)

   *Example:*
   25,600 BTU/Hr (maximum the space can support)
   38,000 BTU/Hr (actual amount of BTU/Hr used)

**⚠ WARNING**

If the area in which the heater may be operated is smaller than that defined as an unconfined space or if the building is of unusually tight construction, provide adequate combustion and ventilation air by one of the methods described in the *National Fuel Gas Code, ANSI Z223.1/NFPA 54, Air for Combustion and Ventilation,* or applicable local codes.

The space in the above example is a confined space because the actual BTU/Hr used is more than the maximum BTU/HR the space can support. You must provide additional fresh air. Your options are as follows:

A. Rework worksheet, adding the space of an adjoining room. If the extra space provides an unconfined space, remove door to adjoining room or add ventilation grills between rooms. See **Ventilation Air From Inside Building.**
B. Vent room directly to the outdoors. See **Ventilation Air From Outdoors.**
C. Install a lower BTU/Hr heater, if lower BTU/Hr size makes room unconfined.

If the actual BTU/Hr used is less than the maximum BTU/Hr the space can support, the space is an unconfined space. You will need no additional fresh air ventilation.

**⚠ WARNING**

**You must provide additional ventilation air in a confined space.**

**Ventilation Air**

**Ventilation Air From Inside Building**

This fresh air would come from an adjoining unconfined space. When ventilating to an adjoining unconfined space, you must provide two permanent openings: one within 12" of the ceiling and one within 12" of the floor on the wall connecting the two spaces **(see options 1 and 2, Figure 23**). You can also remove door into adjoining room **(see option 3, Figure 23).** Each ventilation grill or opening shall have a minimum free area of one square inch per 1,000 BTUH of the total input rating of the gas equipment in the confined space.

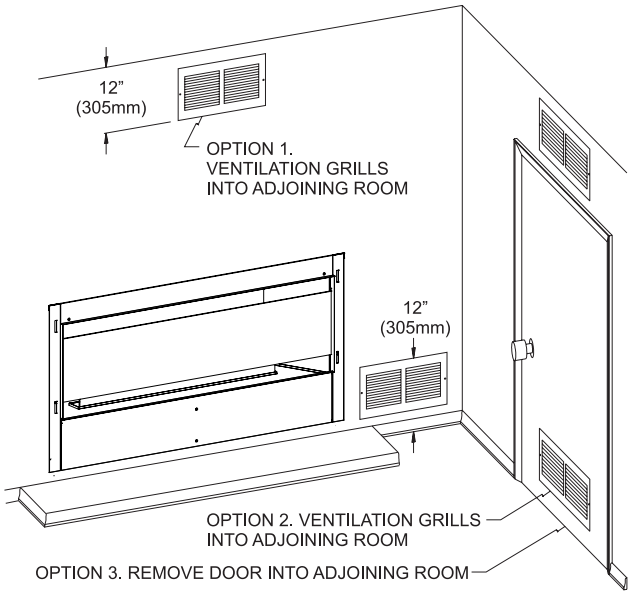



**Figure 23**

**⚠ WARNING**

**Rework worksheet, adding the space of the adjoining unconfined space. The combined spaces must have enough fresh air to supply all appliances in both spaces**.

**Ventilation Air From Outdoors**

Provide extra fresh air by using ventilation grills or ducts. You must provide two permanent openings: one within 12" of the ceiling and one with 12" of the floor. Connect these items directly to the outdoors or spaces open to the outdoors. These spaces include attics and crawl spaces. In most cases for direct communication with the outdoors or direct communication through a vertical duct a free area opening of one square inch per 4,000 BTU/Hr of heater input rating for each grill. If a horizontal duct is used, a grill free area or duct opening shall have a free area opening of one square inch per 2,000 BTU/Hr for each grill. Follow the *National Fuel Code ANSI Z223.1/NFPA54, Air for Combustion and Ventilation* for required size of ventilation grills or ducts.

*IMPORTANT:* Do not provide openings for inlet or outlet air into attic if attic has a thermostat-controlled power vent. Heated air entering the attic will activate the power vent.

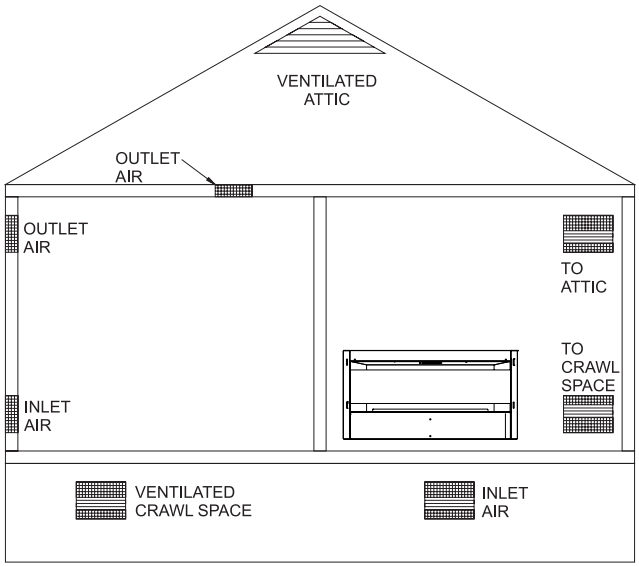
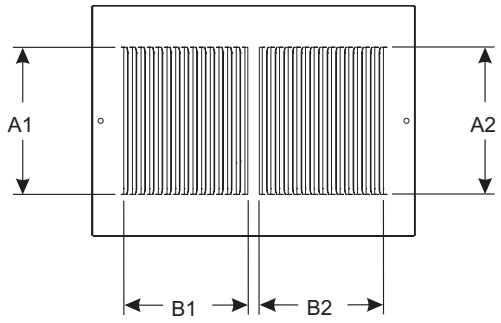



**Figure 24**




A1 x B1 = C1
A2 x B2 = C2
C1 + C2 = Sq. In. Required

**Example:** For a 30,000 BTU Heater, 1 sq in per 1,000 BTU equals 30 sq. in. of opening.

(A1) 5in$^2$ x (B1) 3in$^2$ = (C1) 15in$^2$
(A2) 5in$^2$ x (B2) 3in$^2$ = (C2) 15in$^2$
(C1) 15in$^2$ + (C2) 15in$^2$ = 30in$^2$

**Figure 25**

# COMBUSTIBLE MATERIALS

**Television Considerations**

Installing a television above a fireplace has become increasingly popular; however, the area above any fireplace gets hot and most TV manufacturers recommend against placing their products near a heat source.

If you install a television above this fireplace, Empire Comfort Systems accepts no responsibility for damage or injuries. Follow the television manufacturer's installation instructions, including any recommendations regarding proximity to heat sources.

If you have a TV above your fireplace, turn off the fireplace and let it cool completely before servicing or touching any buttons on the TV.

**Combustible Material**

Do not attach combustible material to the mantel of your fireplace. This is a fire hazard.

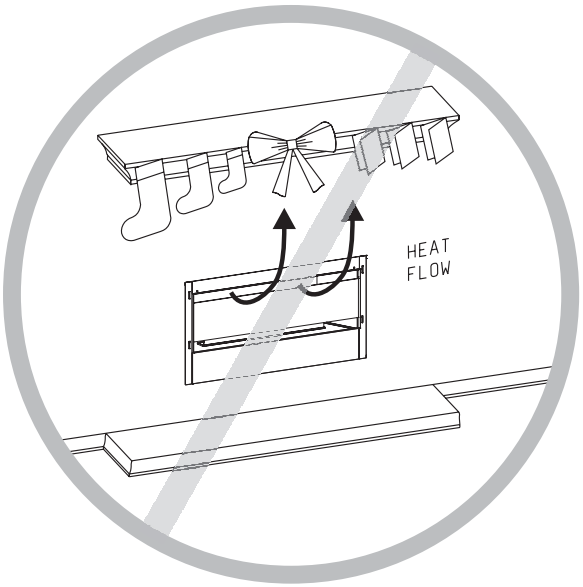



**Figure 26**

# CLEANING AND SERVICING

**Annual inspection and cleaning by your dealer or qualified service technician is recommended to prevent malfunction and/or sooting.**

**TURN OFF HEATER AND ALLOW TO COOL BEFORE CLEANING.**

Remove any optional decorative covers or decorative glass material. Gloves are recommended.

**PERIODIC CLEANING - Refer to parts diagram for location of items discussed below.**

- Do not use cleaning fluid to clean any part of heater.
- Glass should be cleaned with ammonia-free cleaner. Ammonia will etch or stain glass when heated.
- Remove loose particles and dust from the burner, controls and grate.
- Inspect and clean burner air intake hole. Remove lint or particles with brush. Failure to keep air intake hole clean will result in sooting and poor combustion.

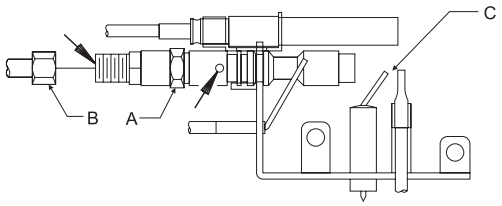
**ANNUAL CLEANING/INSPECTION - Refer to parts diagram for location of items discussed below.**

- Inspect and clean burner air intake hole. Remove lint or particles with vacuum or brush. Failure to keep air intake hole clean will result in sooting and poor combustion.
- Inspect and clean all burner ports.
- Inspect ODS pilot for operation and accumulation of lint at air intake holes.
- Verify flame pattern for proper operation.
- Verify smooth and responsive ignition of main burner.

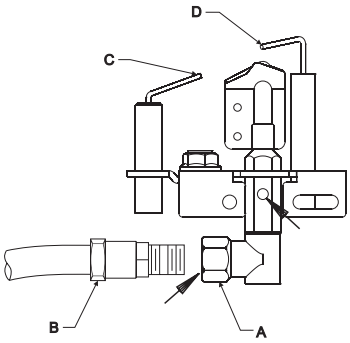
**Cleaning and Pilot Maintenance**
**Oxygen Depletion Sensor Pilot**

When the pilot has a large yellow tip flame, clean the Oxygen Depletion Sensor as follows:

1. Clean the ODS pilot by loosening nut B from the pilot tubing. When this procedure is required, grasp nut A with an open end wrench.
2. Use canned air to blow through the holes indicated by the arrows. This will blow out foreign materials such as dust, lint and spider webs. Use a wrench to hold Nut A as you tighten Nut B.




**Millivolt Pilot**
**Figure 27**




**Intermittent Pilot**
**Figure 28**

**⚠ WARNING**

**Never use needles, wires, or similar cylindrical objects to clean the pilot to avoid damaging the calibrated ruby that controls the gas flow.**

3. If intermittent pilot stops working, clean flame sensor C (Figure 28) with a damp cloth.
4. If intermittent pilot ignitor does not spark, clean ignitor electrode D (Figure 28) with a damp cloth.

# MAINTENANCE

Keep the control compartment and burner area clean by vacuuming or brushing area at least twice a year.

**THE FIREPLACE CAN GET VERY HOT – HANDLE ONLY WHEN COOL.**

Always turn off gas to the pilot before cleaning. For relighting, refer to lighting instructions located on the rating plate of the fireplace.

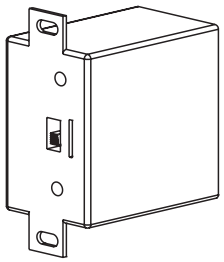
Never obstruct the flow of the combustion and ventilation air. Keep the front of the fireplace clear of all obstacles and materials.

An intermittent pilot may require more frequent battery changes than a millivolt pilot. To replace the batteries in an intermittent unit, follow these steps:

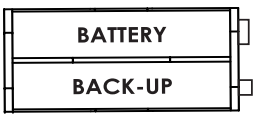
1. Remove the outer glass. See Figures 30 - 32.
2. Remote the optional glass media from inside the fireplace.
3. Lift and set aside the burner cover.
4. Lift the heat shield that is in front of the valve.

Note: The battery backup and remote receiver are located under the heat shield.

5. Replace the four AA batteries in each.
6. Replace the items removed in steps 1 through 3.



REMOTE RECEIVER




BATTERY HOLDER
**Figure 29**

# DECORATIVE ACCESSORY INSTALLATION

**⚠ WARNING**

**Failure to position the parts in accordance with the diagrams and instructions below or failure to use only parts specifically approved for use with this heater may result in property damage or personal injury.**

***Notice*: The burner may be operated with or without the Decorative accessory options. Follow the directions below should you choose to enhance your burner with any one of the available decorative options.**

**Note**: VFLL48SP burner pan will accept 2.75 square feet of Decorative Glass. VFLZ48SP burner pan will accept 3.00 square feet of Decorative glass.

**DECORATIVE GLASS AND ROCKS ACCESSORY PLACEMENT**

**⚠ CAUTION**

**Do not use more glass than recommended.**

**⚠ CAUTION**

**Glass or rocks must not be more than a single layer.**

**⚠ CAUTION**

**Never place media materials on or next to the burner.**

The Decorative Glass options are available in various colors and package sizes. Choose the size appropriate for your fireplaces. See list on page 7.

**⚠ CAUTION**

**Use of gloves and eye protection is required while applying the decorative glass or rocks.**

**Application of the Decorative Glass or Rocks should only be performed after the burner has been fully installed, secured and tested for leaks. If operating the burner with a Remote Control, make sure all batteries are installed and that the burner operates with the remote correctly.**

**⚠ CAUTION**

**Do not use real rocks or glass. Use decorative rocks and decorative glass from the accessories listed on page 7.**

**INSTALLATION**

1. Remove glass front from fireplace by lifting the glass front up, sliding it to the right, and then carefully angle left side out of the slots. **See Figures 30 - 32** (VFLL48SP shown)**.**

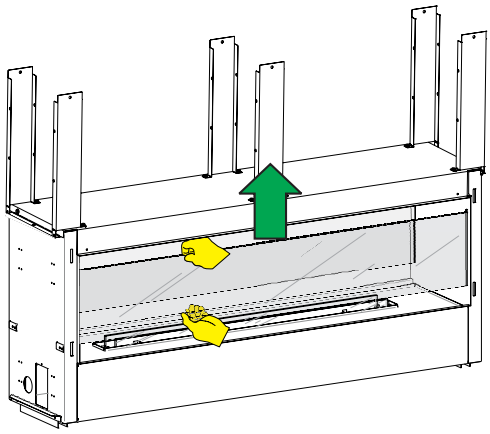


**Figure 30**

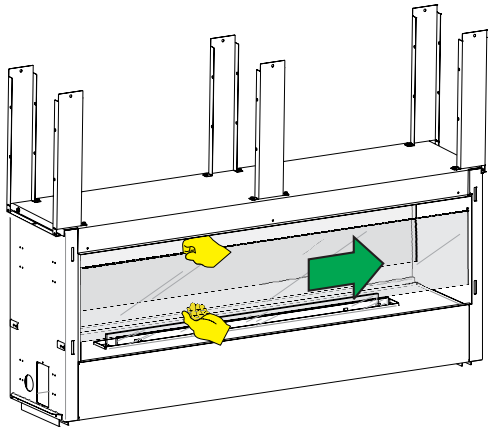


**Figure 31**

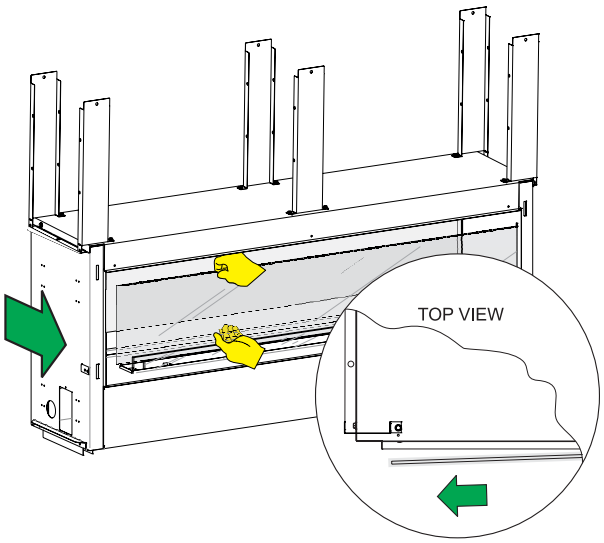



**Figure 32**

# DECORATIVE ACCESSORY INSTALLATION

2. Apply the accessory decorative glass or rocks to the shaded area only. Use enough to cover the floor of the fireplace, but do not allow the decorative glass or rocks to reach higher than the flange surrounding the burner. Never place decorative glass or media inside the flange surrounding the burner itself.
   This fireplace can use crushed glass, glass droplets (1/2 inch), glass drops (1 inch), or ceramic fiber rocks and pebbles. Mix colors and glass types, but do not exceed the recommended amount of decorative glass or rocks.

**⚠ CAUTION**

**Glass or rocks must not be placed around the ends of the burner assembly that would restrict air flow.**

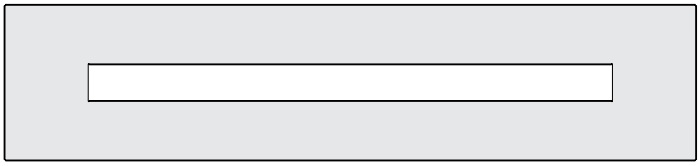


**Figure 33a - VFLL48SP**

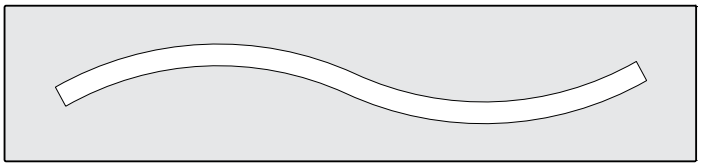


**Figure 33b - VFLZ48SP**

3. Replace the glass front into the fireplace by placing the right side into the slots in the firebox. Carefully angle in the left side of the glass and then slide the glass to the left. Settle the glass into the slots by gently lowering it. **See Figures 34 - 36.**

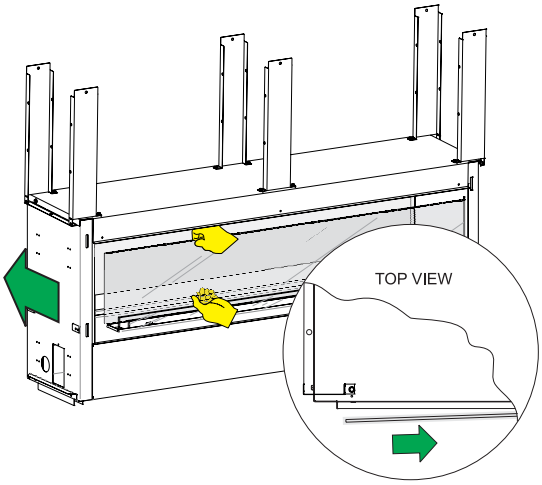



**Figure 34**

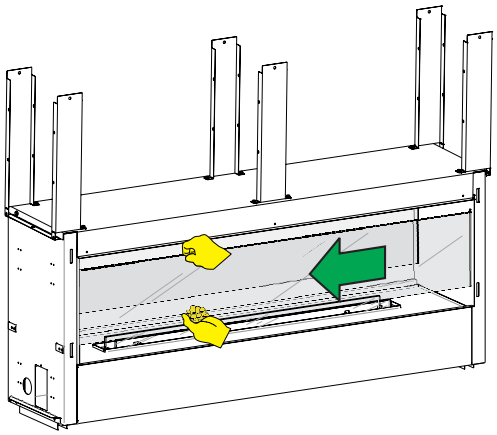


**Figure 35**

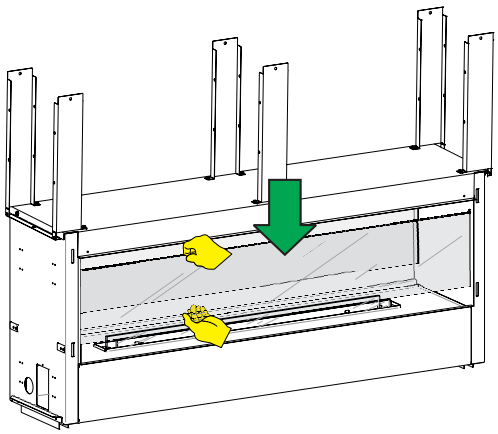


**Figure 36**

# MILLIVOLT CONTROL VALVE LIGHTING INSTRUCTIONS

## FOR YOUR SAFETY READ BEFORE LIGHTING

**⚠ WARNING: If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.**

**A. This appliance has a pilot which must be lighted by hand. When lighting the pilot, follow these instructions exactly.**

**B. BEFORE LIGHTING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.**

**WHAT TO DO IF YOU SMELL GAS**

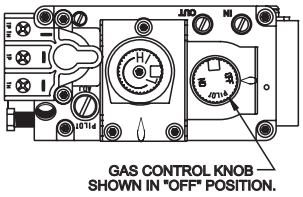
- **Do not try to light any appliance.**
- **Do not touch any electrical switch; Do not use any phone in your building.**
- **Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.**
- **If you cannot reach your gas supplier, call the fire department.**

**C. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it; call a qualified service technician. Force or attempted repair may result in a fire or explosion.**

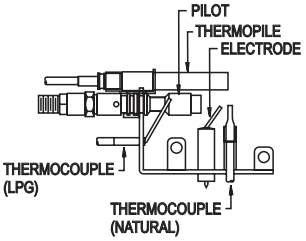
**D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.**

## LIGHTING INSTRUCTIONS

1. STOP! Read the safety information label.
2. Open bottom louver assembly (if applicable).
3. Set REMOTE/OFF/ON switch to "OFF."
4. Turn off all electric power to the appliance (if applicable).
5. Push in gas control knob slightly and turn clockwise to "OFF."
   NOTE: Knob cannot be turned from "PILOT" to "OFF" unless knob is pushed in slightly. Do not force.




6. Wait ten (10) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow "B" in the safety information above. If you do not smell gas, go to the next step.
7. Find pilot - Follow metal tube from gas control. The pilot is in front of the burner on the right side.
8. Turn gas control knob counterclockwise to "PILOT."
9. Push in control knob all the way and hold in. Repeatedly push the Piezo Ignitor Button until the pilot is lit. Continue to hold the control knob in for about one (1) minute after the pilot is lit. Release knob, and it will pop back up. Pilot should remain lit. If it goes out, repeat steps 5 through 9.
   - If knob does not pop up when released, STOP and IMMEDIATELY call a qualified service technician or gas supplier.
   - If the pilot will not stay lit after several tries, turn the gas control knob to "OFF" and call your service technician or gas supplier.
10. Turn gas control knob counterclockwise to "ON."
11. Set REMOTE/OFF/ON switch to desired setting.
12. Turn on all electric power to the appliance (if applicable).
13. Close bottom louver assembly (if applicable).




## TO TURN OFF GAS TO APPLIANCE

1. Open bottom louver assembly (if applicable).
2. Set REMOTE/OFF/ON switch to "OFF."
3. Turn off all electric power to the appliance if service is to be performed (if applicable).
4. Push in gas control knob slightly and turn clockwise to "OFF." Do not force.
5. Close bottom louver assembly (if applicable).

# IP LIGHTING INSTRUCTIONS

## FOR YOUR SAFETY READ BEFORE LIGHTING

⚠ WARNING: If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

A. This appliance has a pilot which must be lighted by hand. When lighting the pilot, follow these instructions exactly.

B. Before lighting smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

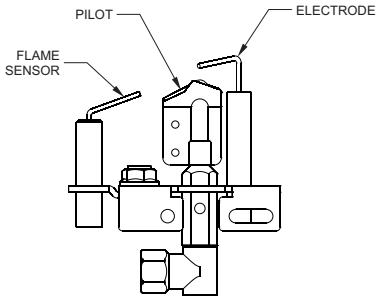
What To Do If You Smell Gas
- Do not try to light any appliance.
- Do not touch any electrical switch;
- Do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

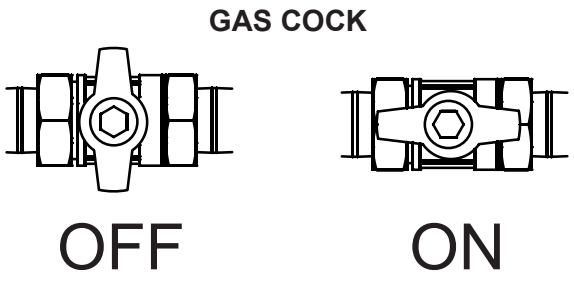
C. Use only your hand to push in or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it; call a qualified service technician. Force or attempted repair may result in a fire or explosion.

D. Do not use this appliance if any part has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control which has been under water.

## LIGHTING INSTRUCTIONS

1. STOP! Read the safety information above.
2. Turn OFF electric power to the appliance.
3. Remove front surround panel assembly or bottom louver if included.
4. Turn gas cock counterclockwise to “On” position.
5. Wait ten (10) minutes to clear out any gas. Then smell for gas, including near the floor. If you smell gas, STOP! Follow “B” in the safety information above on this page. If you do not smell gas, go to the next step.
6. Turn ON electric power to the appliance.
7. Find pilot - Follow metal tube from gas control. The pilot is behind the burner on the right side.
8. Turn main flame to on. If the pilot does not light within 60 seconds, stop and go to Step 5.
9. Refer to remote control instructions for detailed information, control features, and operation. Note: There is a CPI/IP switch behind the right side panel that allows for a continuous standing pilot mode or an intermittent pilot mode. See appliance manual for location of this switch. If the pilot or burner does not stay lit (in the standing pilot mode), stop and immediately call a qualified service technician or gas supplier.
10. If the burner or pilot does not operate properly after several tries, turn the gas cock clockwise to “OFF” and call your service technician or gas supplier.
11. Replace the front surround assembly or close bottom louver assembly.
12. Operation of the gas valve is controlled by a manual on/off switch or a hand held remote control. Refer to remote instructions for detailed operation information.



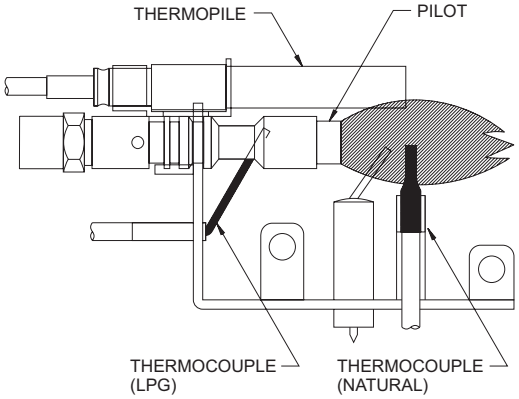




## TO TURN OFF GAS TO FIREPLACE

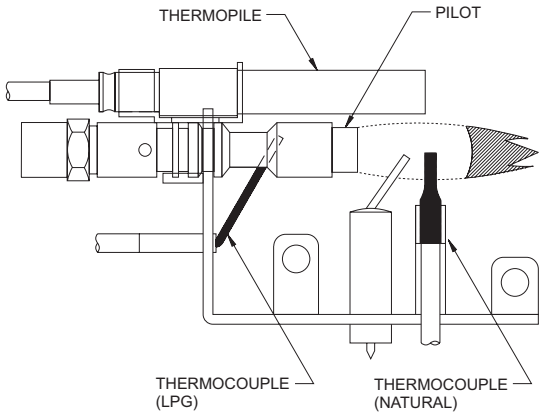
1. Set REMOTE/OFF/ON switch to OFF.
2. Turn off all electric power to the appliance if service is to be performed (if applicable).
3. Lower bottom louver assembly.
4. Push in gas control knob slightly and turn clockwise to "OFF." Do not force.
5. Close bottom louver assembly.

# PILOT FLAME CHARACTERISTICS

**Figures 37 and 38** show a correct pilot flame pattern. The correct flame will be blue and will extend beyond the thermocouple. The flame will surround the thermocouple just below the tip. A slight yellow flame may occur where the pilot flame and main burner flame meet. **Figures 39 and 40** show an incorrect pilot flame pattern. The incorrect pilot flame is not touching the thermocouple. This will cause the thermocouple to cool. When the thermocouple cools, the heater will shut down.



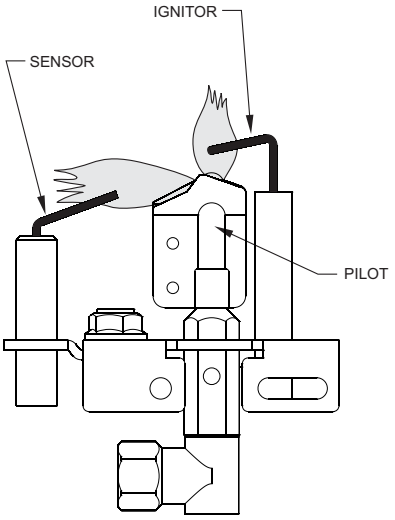

**Correct Pilot Flame Pattern for MILLIVOLT**
**Figure 37**



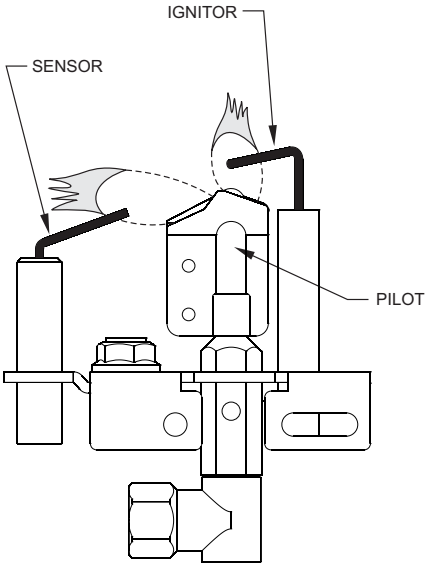

**Incorrect Pilot Flame Pattern for MILLIVOLT**
**Figure 38**

If pilot flame pattern is incorrect, as shown in **Figure 38:**

- See Millivolt Troubleshooting, page 30.




**Correct Pilot Flame Pattern for IP**
**Figure 39**




**Incorrect Pilot Flame Pattern for IP**
**Figure 40**

If pilot flame pattern is incorrect, as shown in **Figure 40:**

- See IP Troubleshooting, pages 38 - 40.

# OPERATION INSTRUCTIONS/FLAME APPEARANCE

Flames from the pilot (front center of burner) as well as the main flame should be visually checked as the fireplace is installed.

In normal operation at full rate after 10 to 15 minutes, the flame appearance should be sets of yellow flames.

***Notice*:** All flames will be random by design, flame height will go up and down.

Avoid any drafts that alter burner flame patterns. Do not allow fans to blow directly into fireplace. Do not place a blower inside the burner area of the firebox. Ceiling fans may create drafts that alter flame patterns. Sooting and improper burning will result.

During manufacturing, fabricating and shipping, various components of this appliance are treated with certain oils, films or bonding agents. These chemicals are not harmful, but may produce annoying smoke and smells as they are burned off during the initial operation of the appliance, possibly causing headaches or eye or lung irritation. This is a normal and temporary occurrence.

The initial break-in operation should last 2-3 hours with the burner at the highest setting. Provide maximum ventilation by opening windows or doors to allow odors to dissipate. Any odors remaining after this initial break-in will be slight and will disappear with continued use.

Once the break in operation has been completed, adjust the heater to the desired output and then replace the surround.

# MILLIVOLT WIRING

Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

Millivolt thermopile is self powered, gas valve does not require 110 volts. Maximum length of 20 feet of 16 AWG to conductor wires is to be used with all optional switches.

**Check 750 Millivolt System Operation**

Millivolt system and all individual components may be checked with a millivolt meter 0-1000 MV range. The thermopile reading needs to be between 325 and 400 millivolts.

**Remote Receiver**

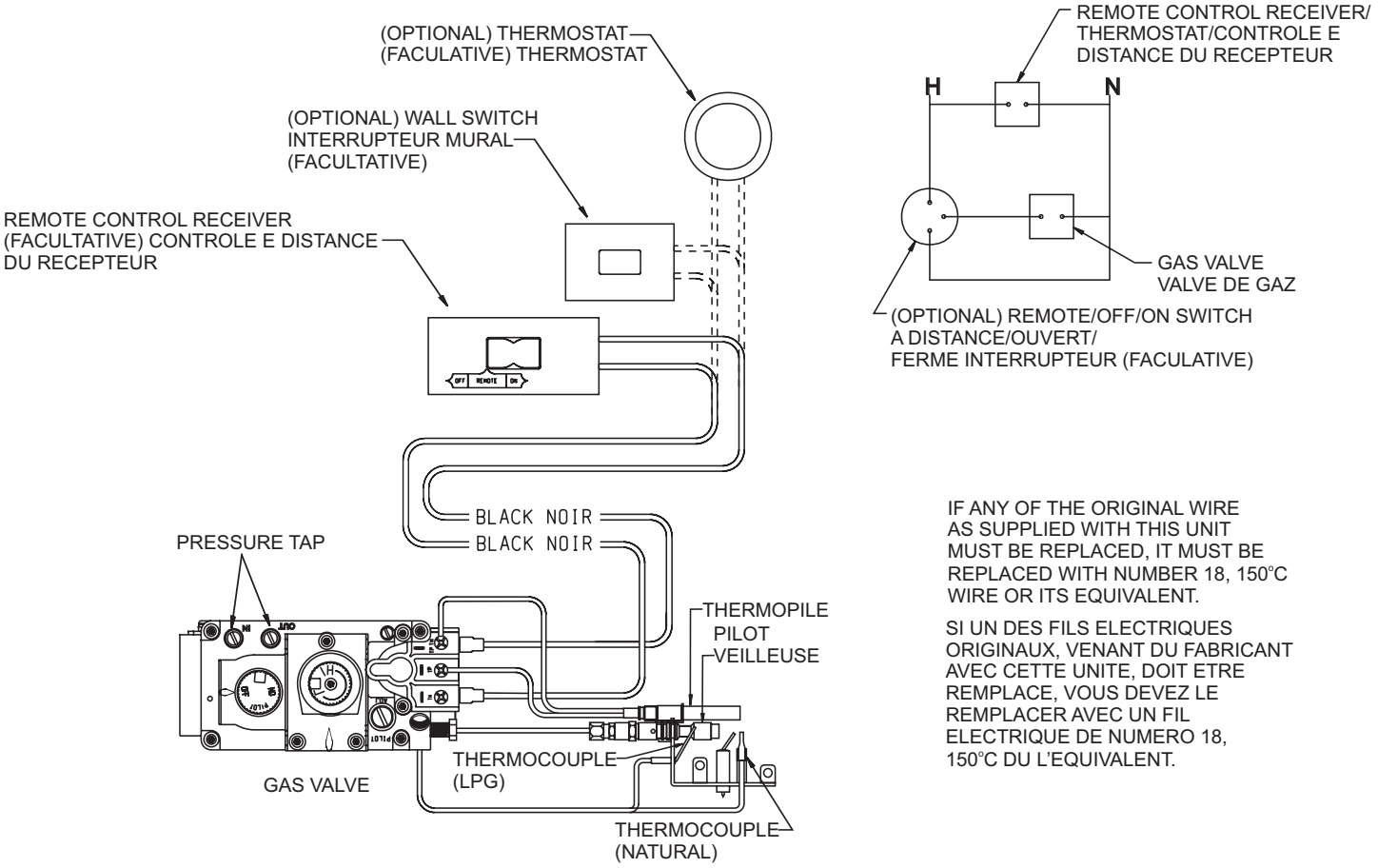
Use the following steps to place the remote receiver adjacent to the gas valve.

**Attention:** The remote receiver bracket is not used in this installation.

1. The remote receiver can not be placed beside the gas valve and burner assembly.
2. When facing the appliance, the remote receiver must be placed to the left of the gas valve.

Refer to remote control installation and operating instructions for more details on remote control.

## WIRING DIAGRAM




IF ANY OF THE ORIGINAL WIRE AS SUPPLIED WITH THIS UNIT MUST BE REPLACED, IT MUST BE REPLACED WITH NUMBER 18, 150°C WIRE OR ITS EQUIVALENT.

SI UN DES FILS ELECTRIQUES ORIGINAUX, VENANT DU FABRICANT AVEC CETTE UNITE, DOIT ETRE REMPLACE, VOUS DEVEZ LE REMPLACER AVEC UN FIL ELECTRIQUE DE NUMERO 18, 150°C DU L'EQUIVALENT.

**Figure 41**

# FRBC - MILLIVOLT CONTROL SYSTEM

## INSTALLATION AND OPERATING INSTRUCTIONS

**IF YOU CANNOT READ OR UNDERSTAND THESE INSTALLATION INSTRUCTIONS DO NOT ATTEMPT TO INSTALL OR OPERATE**

**INTRODUCTION**

This remote control system was developed to provide safe, reliable, and user-friendly remote control system for gas heating appliances.

The system can be operated manually from the transmitter. The system operates on one of 255 security codes that are programmed into the transmitter at the factory.

The transmitter operates on a 12V battery (included) made specifically for remote controls and electronic lighters. Install the 12V battery supplied with the unit into the battery compartment.

**TRANSMITTER**

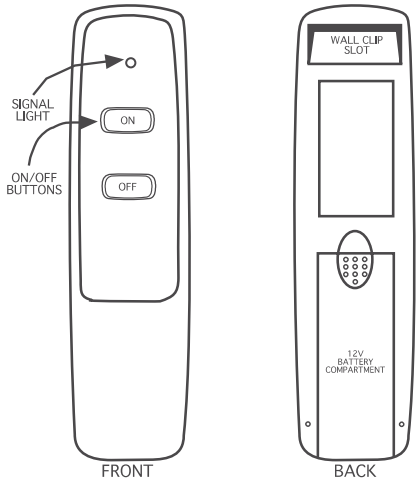



**Figure 42**

Always use alkaline batteries. They perform better and last longer. The transmitter has ON and OFF functions that are activated by pressing either button on the face of the transmitter. When a button on the transmitter is pressed, a signal light on the transmitter illuminates briefly to verify that a signal has been sent. Upon initial use, there may be a delay of three seconds before the remote receiver will respond to the transmitter. This is part of the system's design. If the signal light does not illuminate, check the position of the transmitter's battery.

**REMOTE RECEIVER**

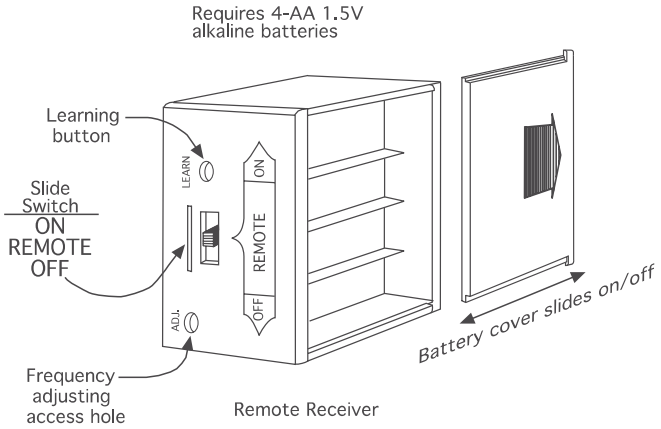



**Figure 43**

The remote receiver operates on 4 AA-size 1.5V batteries. It is recommended that ALKALINE batteries be used for longer battery life and maximum microprocessor performance. IMPORTANT: New or fully charged batteries are essential for proper operation of the remote receiver.

The remote receiver houses the microprocessor that responds to commands from the transmitter to control system operation. The remote receiver has a 3-position slide switch for selecting the MODE of operation: ON/REMOTE/OFF

- With the slide switch in the ON position (toward the LEARN button), the system will remain on until the slide switch is placed in the OFF or REMOTE position.
- With the slide switch in the REMOTE position (centered), the system will only operate if the remote receiver receives commands ***from the transmitter.***
- With the slide switch in the OFF position (away from the LEARN button), the system is off.
- **It is suggested that the slide switch be placed in the off position if you will be away from your home for an extended period of time. If the remote receiver is mounted out of children's reach, placing the slide switch in the OFF position also functions as a safety "lock-out" by both turning the system off and rendering the remote receiver inoperative.**

# FRBC - MILLIVOLT CONTROL SYSTEM

## INSTALLATION

**⚠ WARNING**

This remote control system must be installed exactly as outlined in these instructions. Read all instructions completely before attempting installation. Follow instructions carefully during installation. Any modifications of the ECS remote control or any of its components will void the warrant and may be pose a fire hazard.

Do not connect any gas valve or electronic module directly to 110-120VAC power. Consult gas appliance manufacturer's instructions and wiring schematics for proper placement of all wires. All electronic modules are to be wired to manufacturer's specifications.

The following wiring diagrams are for illustration purpose only. Follow instructions from manufacturer of gas valve and/or electronic module for correct wiring procedures. Improper installation of electric components can cause damage to electronic module, gas valve and remote receiver.

The remote receiver can be either wall-mounted in a standard plastic switch box or placed on or near the fireplace hearth. Preferably, the remote receiver should be wall-mounted in a plastic switch box, as this will protect its electronic components from both the heat produced by the gas appliance and potential damage or abuse that can occur if it is left exposed on the hearth. PROTECTION FROM EXTREME HEAT IS VERY IMPORTANT. Like any piece of electronic equipment, the remote receiver should be kept away from temperatures exceeding 130° F inside the receiver case. Battery life is also significantly shortened if batteries are exposed to high temperatures.
Make sure the remote receiver switch is in the OFF position. It is recommended that 18 gauge solid or stranded wires (not included) be used to make connections between the terminal wiring block on the millivolt gas valve or electronic module and the wire terminals on the remote receiver. For the best results, use 18 gauge solid or stranded wire, with no splices and measuring no longer than 20 ft.

## WIRING INSTRUCTIONS

A qualified electrician or a gas technician who is familiar with the gas appliance and gas valves that will be operated by this remote should install the remote control system. Incorrect wiring connections WILL cause damage to the gas valve or electronic module operating the gas appliance and may also damage the remote receiver.

## WIRING MILLIVOLT VALVES

The remote receiver is connected to the millivolt valve using the TH (thermostat) terminals on the terminal block on the millivolt gas valve.
Connect 18 gauge solid or stranded wires from the remote receiver to the gas valve.

Operation of the remote receiver is similar to that of a thermostat in that both turn the gas valve on and off based on input signals. A thermostat's input signals are different temperatures. The remote receiver's input signals come from the transmitter.

Connect each of the two wires leading from the TH terminals on the millivolt gas valve to either of the two wire terminals on the remote receiver. Normally it does not matter which wires go to which terminal.

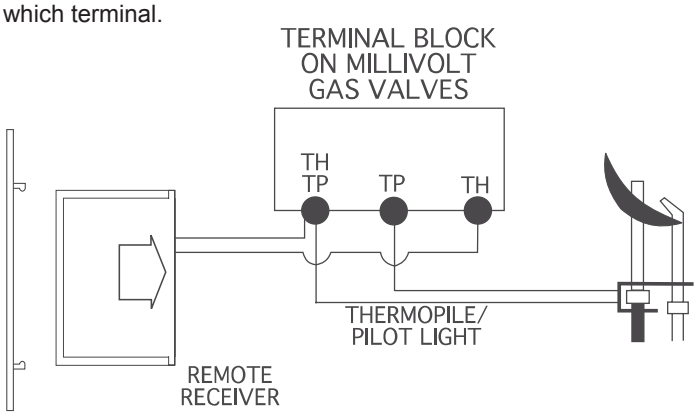



**Figure 44**

## SYSTEM CHECK

### MILLIVOLT VALVES

Light your gas appliance following the lighting instructions that came with the appliance. Confirm that the pilot flame is on; it must be in operation for the main gas valve to operate.

- Slide the 3-position button on the remote receiver to the ON position. The main gas flame (i.e., the fire) should ignite.
- Slide the button to OFF. The flame should extinguish (the pilot flame will remain on).
- Slide the button to REMOTE (the center position), then press the ON button on the transmitter to change the system to ON. The main gas flame should ignite.

# FRBC - MILLIVOLT CONTROL SYSTEM

**GENERAL INFORMATION**

**MATCHING SECURITY CODES**

Each transmitter can use one of 255 unique security codes. It may be necessary to program the remote receiver to LEARN the security code of the transmitter upon initial use, if batteries are replaced, or if a replacement transmitter is purchased from your dealer or the factory. When matching security codes, be sure slide button on the receiver is in the REMOTE position; the code will NOT “LEARN” if the slide switch is in the ON or OFF position. Program the remote receiver to LEARN a new security code by pushing and releasing the learn button. A single "beep" will sound. Press the "ON" button on the remote control, until three "beeps" sound. The three "beeps" are the signal that the receiver has learned the new code. When an existing receiver is matched to a new transmitter, the new security code will override the old one.

The microprocessor that controls the security code matching procedure is controlled by a timing function. If you are unsuccessful in matching the security code on the first attempt, wait 1-2 minutes before trying again – this delay allows the microprocessor to reset its timer circuitry – and try up to two or three more times.

**BATTERY LIFE**

Life expectancy of the alkaline batteries is longer and the perform better than other batteries. Check and replace all batteries annually. When the transmitter no longer operates the remote receiver from a distance it did previously (i.e., the transmitter’s range has decreased) or the remote receiver does not function at all, the batteries should be checked. It is important that the remote receiver batteries are fully charged and provides continuous output voltage of a least 5.3 volts. The length of the wire between the remote receiver and gas valve directly affects the operating performance of the remote system. The longer the wire, the more battery power is required to deliver signals between the remote receiver and the gas valve. Recommended length is no longer than 20 feet. The transmitter should operate with as little as 5.0 volts battery power.

**TROUBLE SHOOTING**

If you encounter problems with your fireplace system, the problem may be with the fireplace itself or it could be with the ECS remote. Review the fireplace manufacturer’s operation manual to make sure all connections are properly made. Then check the operation of the ECS remote in the following manner:

- Make sure the batteries are correctly installed in the RECEIVER. One reversed battery will keep receiver from operating properly.
- Check battery in Transmitter to make sure contacts are touching (+) and (-) ends of battery. Bend metal contacts in for tighter fit.
- Be sure RECEIVER and Transmitter are within 20’-25’ operating range.
- Keep RECEIVER from temperatures exceeding 130° F. Battery life shortened when ambient temperatures are above 130° F.
- If RECEIVER is installed in tightly enclosed metal surround, the operating distance will be shortened.

**RECEIVER ADJUSTMENT – RECOMMENDED ADJUSTMENT**

NOTE: The slide button, White or Black, covers the ADJ access hole when installed.

A. To adjust at the receiver, use a small slotted screwdriver. Turn the adjustment screw counter-clockwise about 5 degrees or a maximum of 1/8 turn. This should correct the distance problem.
B. If that does not correct the problem, return adjustment screw to original position and then turn adjustment screw clockwise.

This adjustment is like tuning your radio. If you keep turning the adjustment screw, in either direction, you will go past the proper setting (tuning).

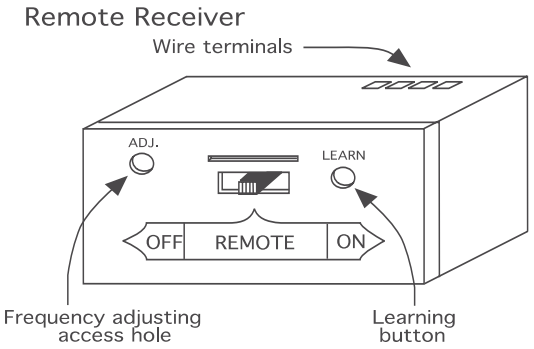



**Figure 45**

**SPECIFICATIONS**

BATTERIES:
Transmitter 12V (A23)
Remote Receiver
6V - 4ea. AA1.5 Alkaline

FCC ID No.’s: transmitter - K9L1002TX;
Receiver - K9L3001RX

Operating Frequency: 303.875MHZ

Canadian ISC ID No.’s: transmitter - 2439 102 728;

Receiver - 2439 102 728A

FCC REQUIREMENTS
NOTE: THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY RADIO OR TV INTERFERENCE CAUSED BY UNAUTHORIZED MODIFICATIONS TO THIS EQUIPMENT. SUCH MODIFICATIONS COULD VOID THE USER’S AUTHORITY TO OPERATE THE EQUIPMENT.

# MILLIVOLT TROUBLESHOOTING
# SYMPTOMS, POSSIBLE CAUSES AND CORRECTIONS

1. **When ignitor button is pressed, there is no spark at ODS/ pilot.**
   a. Ignitor electrode positioned wrong - Replace pilot.
   b. Ignitor electrode is broken - Replace pilot.
   c. Ignitor electrode not connected to ignitor cable - Reconnect ignitor cable.
   d. Ignitor cable pinched or wet. Keep ignitor cable dry - Free ignitor cable if pinched by any metal or tubing.
   e. Broken ignitor cable - Replace ignitor cable.
   f. Bad piezo ignitor - Replace piezo ignitor.
2. **Appliance produces unwanted odors.**
   a. Appliance burning vapors from paint, hair spray, glues, etc. - Ventilate room. Stop using odor causing products while heater is running.
   b. Gas leak - Locate and correct all leaks.
3. **Appliance shuts off during use. (Pilot and main burner are off.)**
   a. Not enough fresh air is available for ODS/pilot to operate - Open window and/or door for ventilation.
   b. Low line pressure - Contact local gas company.
   c. ODS/pilot is partially clogged - Clean ODS/pilot.
   d. Defective thermocouple - Replace pilot.
4. **Appliance shuts off during use. (Pilot stays on.)**
   a. Low line pressure - Check line pressure to the valve.
   b. Defective thermopile - Check pilot flame, check wire connections, output should be a minimum of 325 millivolts across. TH/TP and TP terminals with REMOTE/OFF/ON switch off.
5. **Gas odor even when control knob is in OFF position.**
   a. Gas leak - Locate and correct all leaks.
   b. Control valve defective - Replace control valve.
6. **When ignitor button is pressed, there is spark at ODS/pilot, but no ignition.**
   a. Gas supply turned off or manual shutoff valve closed - Turn on gas supply or open manual shutoff valve.
   b. Control knob not in PILOT position - Turn control knob to PILOT position.
   c. Control knob not pressed in while in PILOT position - Press in control knob while in PILOT position.
   d. Air in gas lines when installed - Continue holding down control knob. Repeat igniting operation until air is removed.
   e. ODS/pilot is clogged - Replace ODS/pilot assembly or get it serviced.
   f. Gas regulator setting is not correct - Replace gas regulator.
7. **ODS/pilot lights but flame goes out when control knob is released.**
   a. Control knob not fully pressed in - Press in control knob fully.
   b. Control knob not pressed in long enough - After ODS/pilot lights, keep control knob pressed in 30 seconds.
   c. Manual Shutoff valve not fully open - Fully open manual shutoff valve.
   d. Thermocouple connection loose at control valve - Hand tighten until snug, then tighten 1/4 turn more.
   e. Pilot flame not touching thermocouple, which allows thermocouple to cool, causing pilot flame to go out. This problem could be caused by either low gas pressure or dirty or partially clogged ODS/pilot - Contact local gas company.
   f. Thermocouple damaged - Replace thermocouple.
   g. Control valve damaged - Replace control valve.
8. **Burner does not light after ODS/pilot is lit.**
   a. Burner orifice clogged - Clean burner or replace main burner orifice.
   b. Burner orifice diameter is too small - Replace burner orifice.
   c. Inlet gas pressure is too low - Contact qualified service person.
9. **If burning at main burner orifice occurs (a loud, roaring blow torch noise).**
   a. You must turn off burner assembly and contact a qualified service person.
   b. Manifold pressure is too low - Contact local gas company.
   c. Burner orifice clogged - Clean burner or replace burner orifice.
10. **Heater produces a whistling noise when main burner is lit.**
    a. Turning control knob to HIGH position when main burner is cold - Turn control knob to LOW position and let warm up for a minute.
    b. Air in gas line - Operate burner until air is removed from line. Have gas line checked by local gas company.
    c. Dirty or partially clogged burner orifice - Clean burner or replace burner orifice.

**If the gas quality is bad, your pilot may not stay lit, the burners may produce soot and the heater may backfire when lit. If the gas quality or pressure is low, contact your local gas supplier immediately.**

# PROFLAME - IP CONTROL SYSTEM

| Technical Data | |
|---|---|
| **Remote Control** | |
| Supply voltage | 4.5 V (three 1.5 V AAA batteries) |
| Ambient temperature ratings | 0-50°C (32 - 122°F) |
| Radio frequency | 315 MHz |
| | |
| **Receiver** | |
| Supply voltage | 6.0 V (four 1.5 V AA batteries) |
| Ambient temperature ratings | 0-60°C (32 - 140°F) |
| Radio frequency | 315MHZ |

**⚠ WARNING**

THE TRANSMITTER AND RECEIVER ARE RADIO FREQUENCY DEVICES. PLACING THE RECEIVER IN OR NEAR METAL MAY SEVERELY REDUCE THE SIGNAL RANGE.

**⚠ WARNING**

**FIRE HAZARD. CAN CAUSE SEVERE INJURY OR DEATH.**
THE RECEIVER CAUSES IGNITION OF THE APPLIANCE. THE APPLIANCE CAN TURN ON SUDDENLY. KEEP AWAY FROM THE APPLIANCE BURNER WHEN OPERATING THE REMOTE SYSTEM OR ACTIVATING MANUAL BYPASS OF THE REMOTE SYSTEM.

**⚠ CAUTION**

**PROPERTY DAMAGE HAZARD.**
**EXCESSIVE HEAT CAN CAUSE PROPERTY DAMAGE.**
THE APPLIANCE CAN STAY LIT FOR MANY HOURS. TURN OFF THE APPLIANCE IF IT IS NOT GOING TO BE ATTENDED FOR ANY LENGTH OF TIME. ALWAYS PLACE THE TRANSMITTER WHERE CHILDREN CAN NOT REACH IT.

**ATTENTION**

- TURN “OFF” THE MAIN GAS SUPPLY OF THE APPLIANCE DURING INSTALLATION OR MAINTENANCE OF THE RECEIVER.
- PLACE THE RECEIVER’S 3 POSITION SLIDER SWITCH IN THE “OFF” POSITION DURING INSTALLATION OR MAINTENANCE.
- TURN “OFF” MAIN GAS SUPPLY TO THE APPLIANCE PRIOR TO REMOVING OR REINSERTING THE BATTERIES IN THE RECEIVER.

**TRANSMITTER (REMOTE CONTROL WITH LCD DISPLAY)**
The Proflame Transmitter uses a streamline design with a simple button layout and informative LCD display **(Figure 46).**
The Transmitter is powered by 3 AAA type batteries. A Mode Button is provided to Index between the features and a Thermostat Button is used to turn on/off or index through thermostat functions **(Figures 46 and 47).**

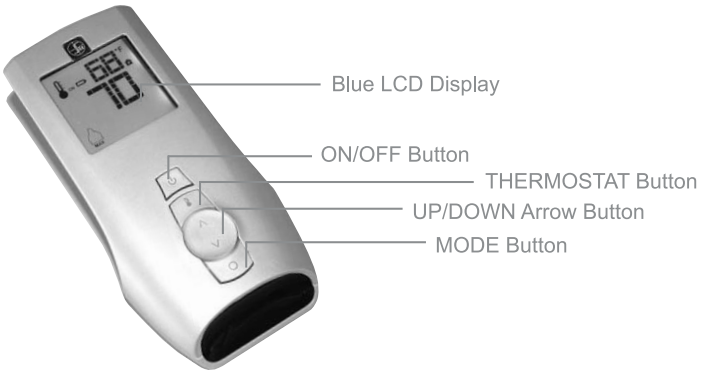



**Figure 46 - Proflame Transmitter**

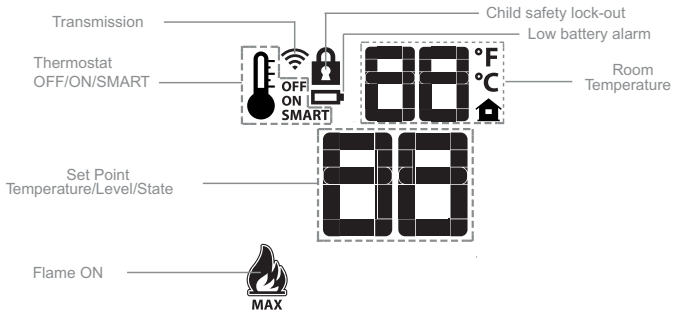



**Figure 47 - Transmitter LCD display**

**RECEIVER**

The Proflame Receiver **(Figures 48a and 48b)** connects directly to the gas valve and stepper motor with a wiring harness. The Receiver is powered by 4 AA type batteries. The Receiver accepts commands via radio frequency from the Transmitter to operate the appliance in accordance with the particular Proflame system configuration. The Receiver three position slider switch can be set to one of three positions: ON (Manual Override), Remote (Remote control) or Off.

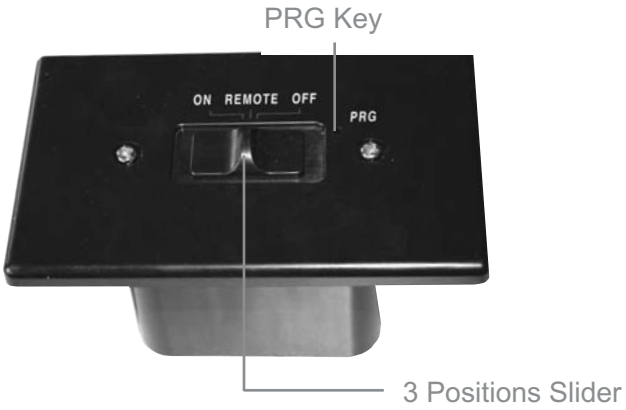



**Figure 48a - Proflame Receiver Body Front**

**Figure 48b - Proflame Receiver Body Back**

**OPERATING PROCEDURE**

**Initializing the System for the first time**

Install the 4 AA batteries into the receiver battery bay. Note the polarity of battery and insert into the battery bay as indicated on the Battery cover (+/-). Place the 3 position slider switch in the "Remote" position.

Using the end of a paper clip, or other similar object, insert the end of the paper clip into the hole marked "PRG" on the Receiver front cover. The Receiver will "beep" three (3) times to indicate that it is ready to synchronize with a Transmitter. Install the 3 AAA type batteries in the Transmitter battery bay, located on the base of the Transmitter. With the batteries already installed in the Transmitter, push the On button. The Receiver will "beep" four times to indicate the Transmitter's command is accepted and sets to the particular code of that Transmitter. The system is now initialized.

**Temperature indication Display**

With the system in the "OFF" position, press the Thermostat Button and the Mode Button at the same time. Look at the LCD screen on the Transmitter to verify that a C or F is visible to the right of the Room Temperature display. **(Figures 49 and 50)**

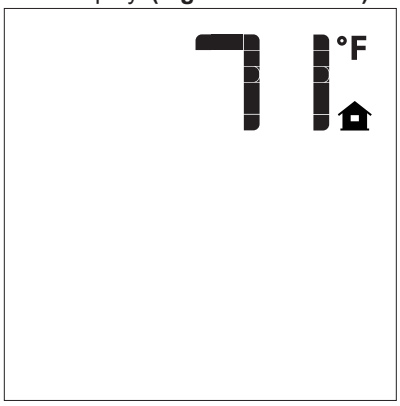



**Figure 49 - Fahrenheit**

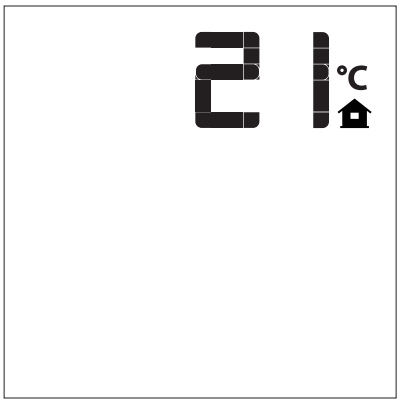



**Figure 50 - Celsius**

**Turn on the Appliance**
Press the ON/OFF Button on the Transmitter. The Transmitter display will show all active Icons on the screen. At the same time the Receiver connects the thermopile to the gas valve millivolt coil and the appliance main burner turns on. A single “beep” from the Receiver will confirm reception of the command.

**Turn off the Appliance**
Press the ON/OFF Button on the Transmitter. The Transmitter LCD display will only show the room temperature and Icon **(Figure 51).** At the same time the Receiver disconnects the thermopile from the gas valve millivolt coil and the appliance burner turns off. A single “beep” from the Receiver confirms reception of the command.

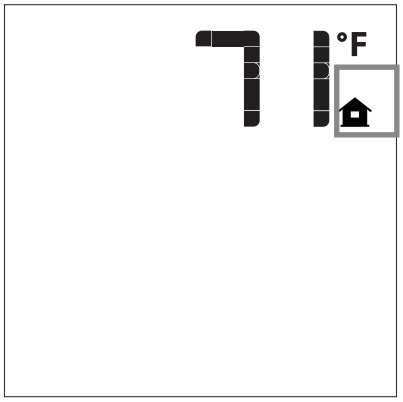



**Figure 51**

**Remote Flame Control**
The Proflame GTM has six flame levels. With the system on, and the flame level at the maximum in the appliance, pressing the Down Arrow Button once will reduce the flame height by one step until the flame is turned off. The Up Arrow Button will increase the flame height each time it is pressed. If the Up Arrow Button is pressed while the system is on but the flame is off, the flame will come on in the high position **(Figure 52 - 55).** A single “beep” will confirm reception of the command.

**Figure 52**

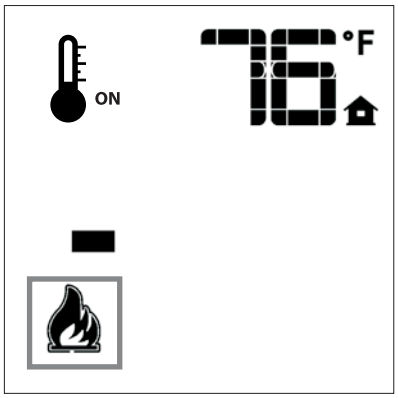



**Figure 53**

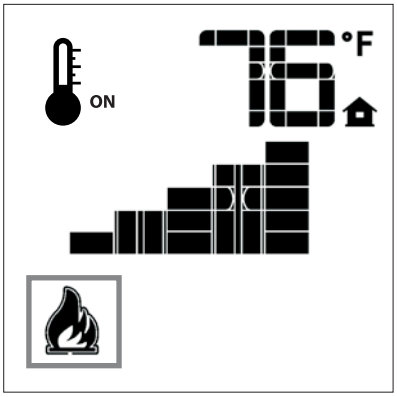



**Figure 54**

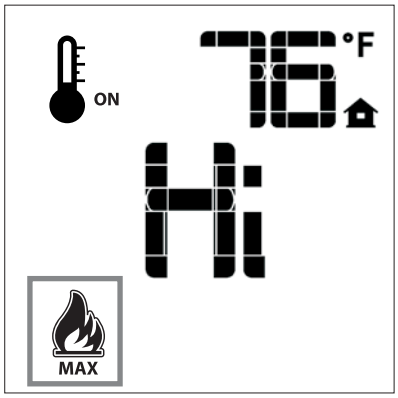



**Figure 55**

**ROOM THERMOSTAT ( Transmitter Operation)**

The Remote Control can operate as a room thermostat. The thermostat can be set to a desired temperature to control the comfort level in a room.

To activate this function, press the Thermostat Button **(Figure 46)**. The LCD display on the Transmitter will change to show that the room thermostat is “ON” and the set temperature is now displayed **(Figures 56a and 56b).** To adjust the set temperature, press the Up or Down Arrow Buttons until the desired set temperature is displayed on the LCD screen of the Transmitter.

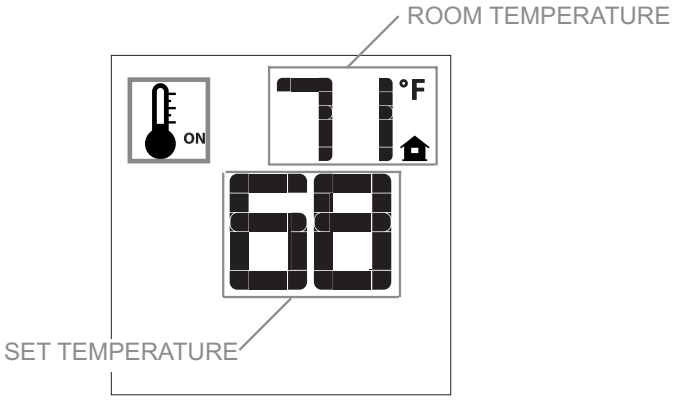



**Figure 56a**

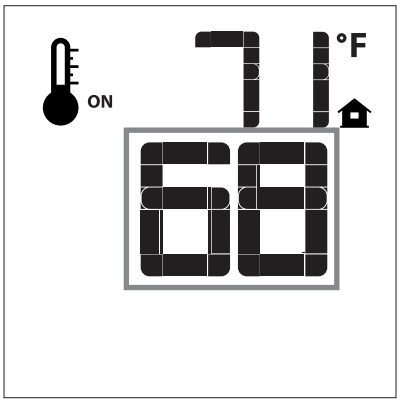



**Figure 56b**

**Smart Thermostat (Transmitter Operation)**

The Smart Thermostat function adjusts the flame height in accordance to the difference between the set point temperature and the actual room temperatures. As the room temperature gets closer to the set point the Smart Function will modulate the flame down.

To activate this function, press the Thermostat Button **(Figure 46)** until the word "SMART" appears to the right of the temperature bulb graphic **(Figure 57)**. To adjust the set temperature, press the Up or Down arrow Buttons until the desired set point temperature is displayed on the LCD screen of the Transmitter **(Figure 58).**

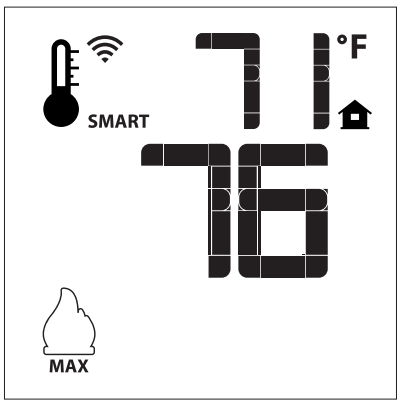



**Figure 57**

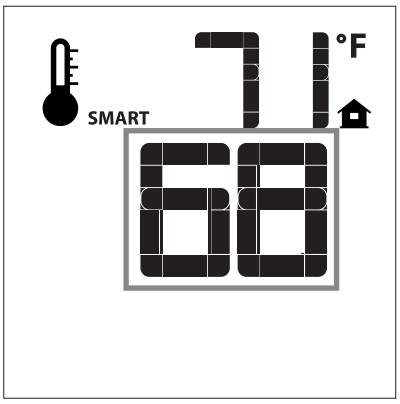



**Figure 58**

**BUTTON LOCK**

This function will lock the buttons to avoid unsupervised operation. To activate this function, press the MODE and the UP Arrow Button at the same time **(Figure 59).**

To de-activate this function, press the MODE and the UP Arrow Button at the same time.

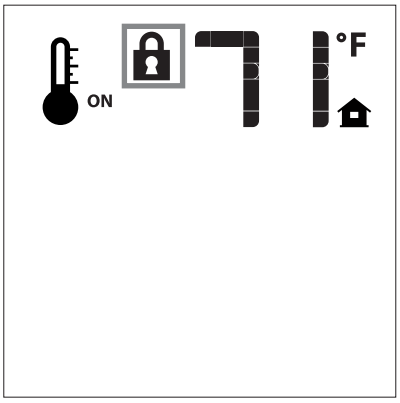



**Figure 59**

**LOW BATTERY POWER DETECTION**

**Transmitter**

The life span of the remote control batteries depends on various factors: quality of the batteries used, the number of ignitions of the appliance, the number of changes to the room thermostat set point, etc.

When the Transmitter batteries are low, a Battery Icon will appear on the LCD display of the Transmitter **(Figure 60)** before all battery power is lost. When the batteries are replaced this Icon will disappear.

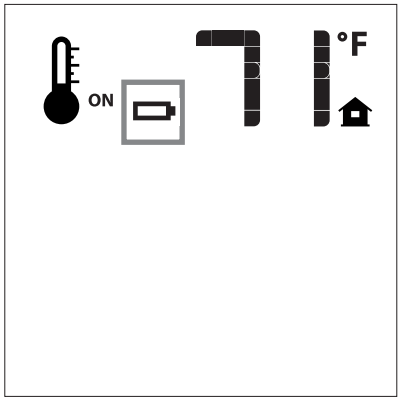



**Figure 60**

**Receiver**

The life span of the Receiver batteries depends on various factors: quality of the batteries used, the number of ignitions of the appliance, the number of changes to the room thermostat set point, etc. When the Receiver batteries are low, No “beep” will be emitted from the Receiver when it receives an On/Off command from the Transmitter. This is an alert for a low battery condition for the Receiver. When the batteries are replaced the “beep” will be emitted from the Receiver when the ON/OFF Button is pressed (See Initialization of The System).

**MANUAL BYPASS OF THE REMOTE SYSTEM**

If the batteries of the Receiver or Transmitter are low or depleted, the appliance can be turned on manually by sliding the three position slider switch on the Receiver to the ON position.

This will bypass the remote control feature of the system and the appliance main burner will come on if the gas valve is in the “On” position.

# IP OPERATING INSTRUCTIONS

**5.25 VDC ELECTRONIC CONTROL VALVE**

The electronic control valve system includes the ability to switch the pilot from a standing pilot mode to an intermittent pilot mode.

- **IP Mode** - In the Intermittent Pilot mode, when the unit is turned ON, it will cause spark to the pilot, light the pilot, then allow the burner to light. When the unit is turned to OFF, both the burner and pilot will be OFF.
- **CPI Mode** - In the Continuous Pilot mode, the pilot remains ON continuously even when the burner is turned OFF.

Note: A small toggle switch is located on a bracket that is used to switch from IP (upward position) to the CPI (downward position). **See Figure 61.**

When the unit is turned to ON, the electrical current will energize a spark to the pilot igniter. Once the pilot sensor heats up (after a few seconds), the valve will be energized, allowing gas to flow to the burner.

1. Follow the SAFETY and LIGHTING INSTRUCTIONS for Intermittent Pilot controls found in this manual, and on labels found in the control compartment located in the lower cavity of the appliance.
2. During the operating season (or in power outage periods), it is recommended that the pilot remain in the CPI (standing pilot mode) to reduce cold start issues, and/or conserve battery backup power during a power outage.
3. The gas valve has inlet and outlet pressure taps as shown in **Figure 61.** Refer to page 12 for gas pressure requirements.

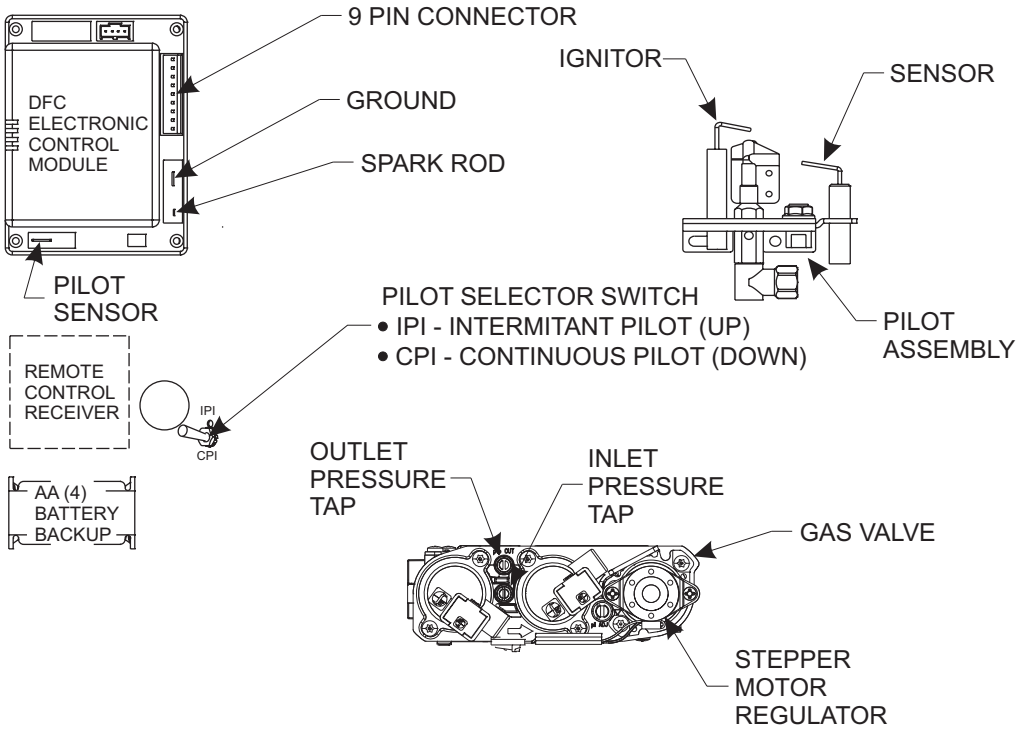
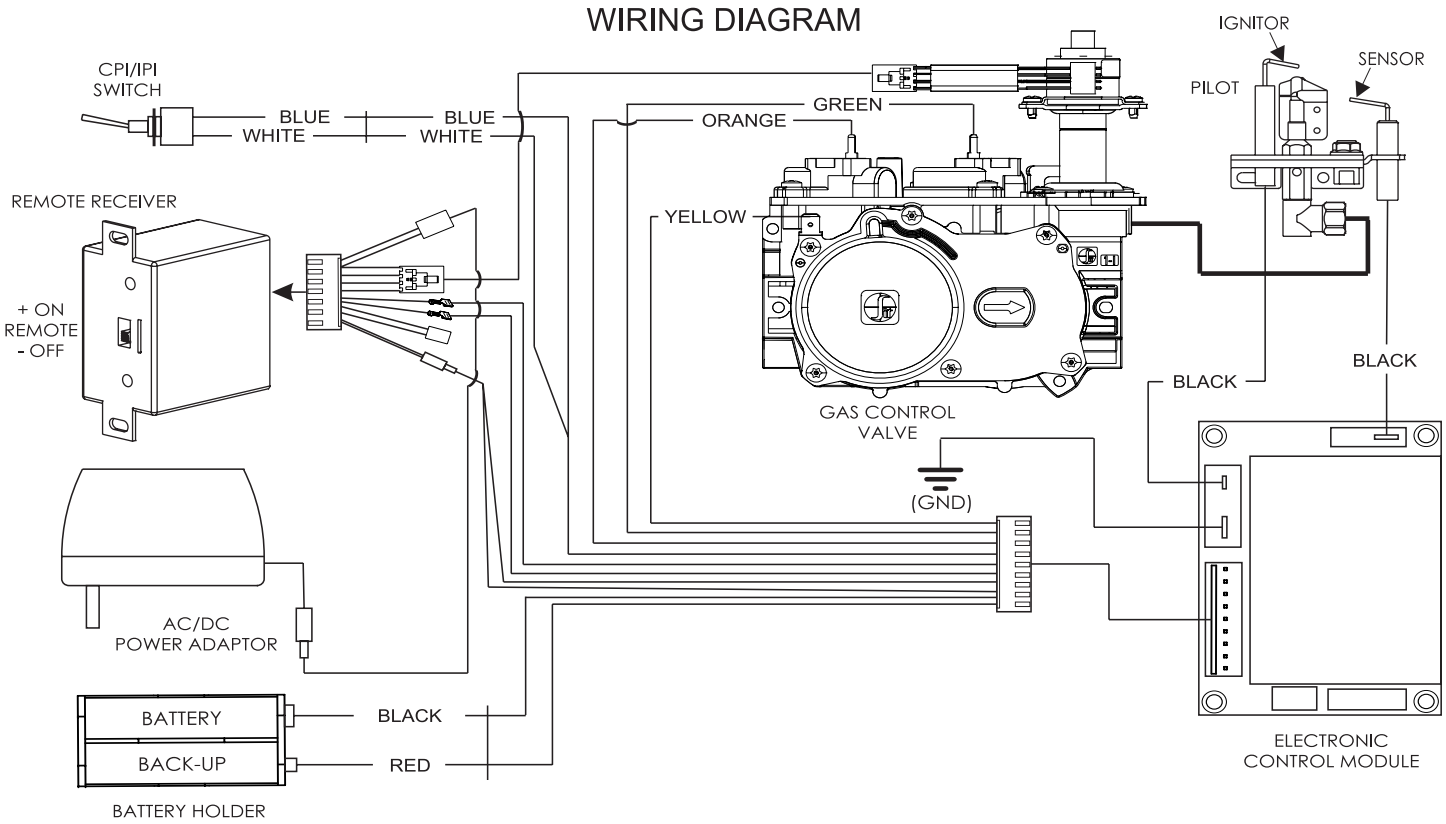



**Figure 61**

# IP WIRING




If any of the original wire as supplied with this unit must be replaced, it must be replaced with equivalent gauge and temperature rated wire.

This appliance is only for use with the type of gas indicated on the rating plate and may be installed in an aftermarket, permanently located, manufactured (mobile) home where not prohibited by local codes. This appliance is not convertible for use with other gases.

**WARNING:** Improper installation, adjustment, alteration, service or maintenance can cause property damage, personal injury or loss of life. Installation and service must be performed by a qualified installer, service agency or the gas supplier.

The wire connections in Figure 62 are not used.

**Figure 62**

# IP TROUBLESHOOTING

**Brief Description of the Components**

The Digital Fireplace Control (DFC) is an automatic gas ignition system based on a single micro-controller core. This control manages all functions related to ignition, flame sensing and supervision for atmospheric applications.

The DFC can be set to provide continuous or intermittent ignition control sequences and flame monitoring with safety shutdown in case of failure.

The DFC is set up as a stand alone (AC powered system with battery back up. See IP Lighting Instructions on page 24 and Wiring Diagram on page 37.

**Troubleshooting**

Before proceeding with the procedures in the following troubleshooting table, verify that the power supply (AC/DC adapter) is present and that the batteries inside the receiver and/or optional battery pack are fresh and installed with correct polarity.

Make sure all the connections between the wire harnesses and system components are proper and positive.

Verify that the static inlet pressure meets the manufacturer's recommended inlet pressure. If necessary adjust the line pressure regulator.

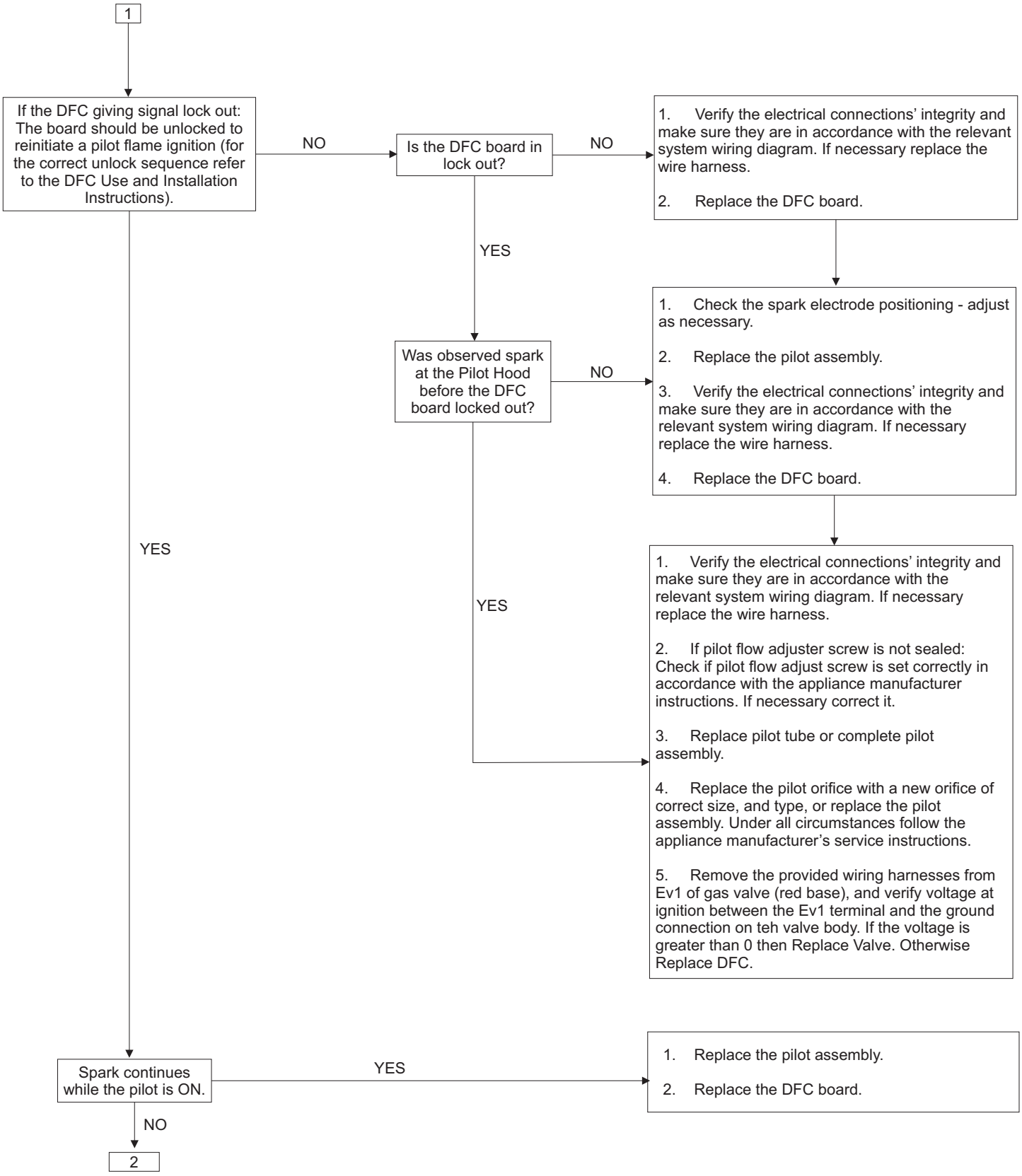
If the recommended actions for the following troubleshooting chart do not help to address the problem consider replacing wiring harnesses.

**⚠ WARNING**

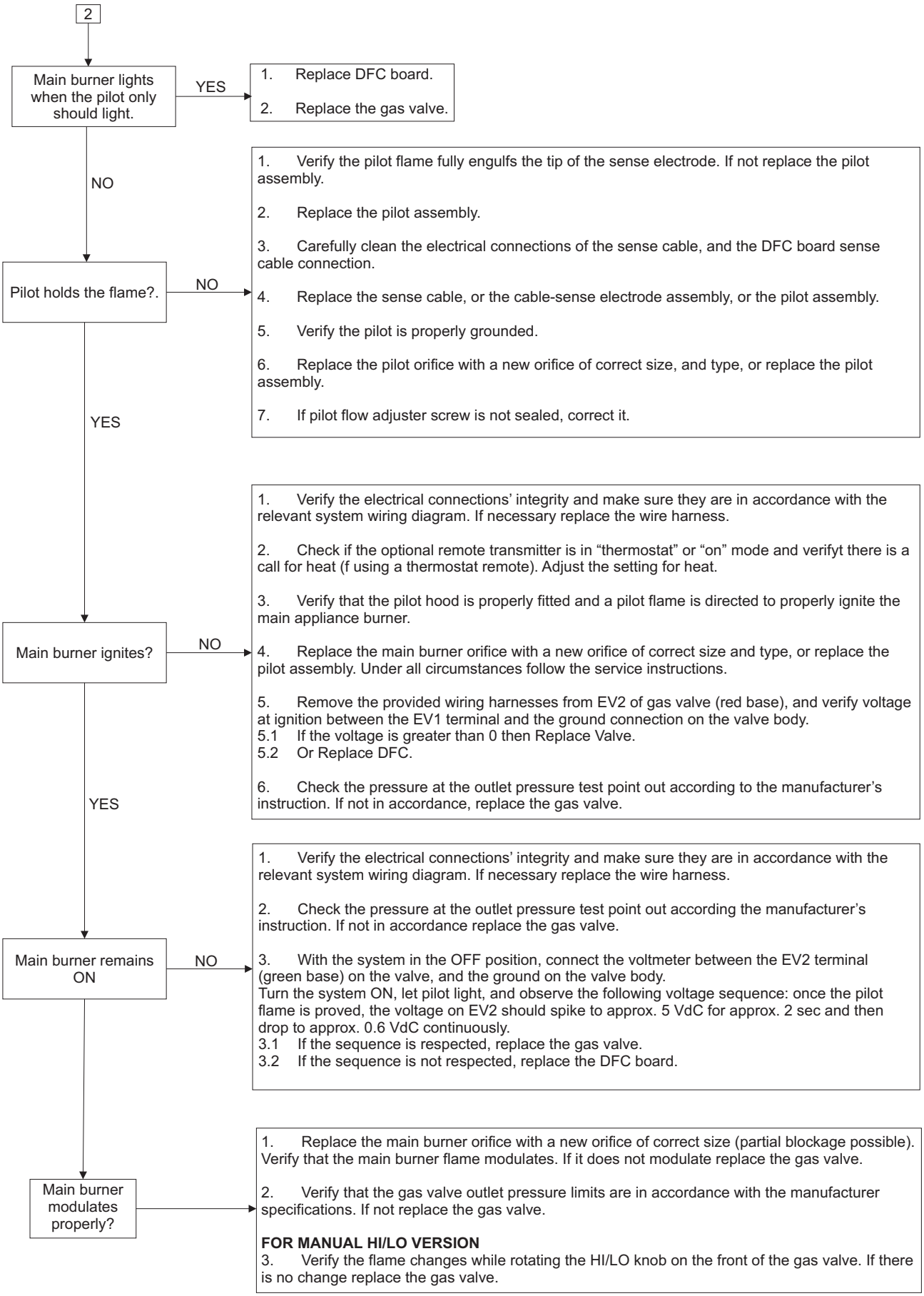
**Any actions performed on the gas valve must be performed in accordance with this instruction manual. Likewise, any actions performed on the DFC or other system components must be done in accordance with the individual component instructions.**

**Replacement of components must be performed in accordance with this instructions manual.**

# IP TROUBLESHOOTING


1
If the DFC giving signal lock out: The board should be unlocked to reinitiate a pilot flame ignition (for the correct unlock sequence refer to the DFC Use and Installation Instructions).
NO
Is the DFC board in lock out?
NO
1. Verify the electrical connections' integrity and make sure they are in accordance with the relevant system wiring diagram. If necessary replace the wire harness.
2. Replace the DFC board.
YES
Was observed spark at the Pilot Hood before the DFC board locked out?
NO
1. Check the spark electrode positioning - adjust as necessary.
2. Replace the pilot assembly.
3. Verify the electrical connections' integrity and make sure they are in accordance with the relevant system wiring diagram. If necessary replace the wire harness.
4. Replace the DFC board.
YES
YES
1. Verify the electrical connections' integrity and make sure they are in accordance with the relevant system wiring diagram. If necessary replace the wire harness.
2. If pilot flow adjuster screw is not sealed: Check if pilot flow adjust screw is set correctly in accordance with the appliance manufacturer instructions. If necessary correct it.
3. Replace pilot tube or complete pilot assembly.
4. Replace the pilot orifice with a new orifice of correct size, and type, or replace the pilot assembly. Under all circumstances follow the appliance manufacturer's service instructions.
5. Remove the provided wiring harnesses from Ev1 of gas valve (red base), and verify voltage at ignition between the Ev1 terminal and the ground connection on teh valve body. If the voltage is greater than 0 then Replace Valve. Otherwise Replace DFC.
Spark continues while the pilot is ON.
YES
1. Replace the pilot assembly.
2. Replace the DFC board.
NO
2

# IP TROUBLESHOOTING


2
Main burner lights when the pilot only should light.
YES
1. Replace DFC board.
2. Replace the gas valve.
NO
Pilot holds the flame?.
NO
1. Verify the pilot flame fully engulfs the tip of the sense electrode. If not replace the pilot assembly.
2. Replace the pilot assembly.
3. Carefully clean the electrical connections of the sense cable, and the DFC board sense cable connection.
4. Replace the sense cable, or the cable-sense electrode assembly, or the pilot assembly.
5. Verify the pilot is properly grounded.
6. Replace the pilot orifice with a new orifice of correct size, and type, or replace the pilot assembly.
7. If pilot flow adjuster screw is not sealed, correct it.
YES
Main burner ignites?
NO
1. Verify the electrical connections' integrity and make sure they are in accordance with the relevant system wiring diagram. If necessary replace the wire harness.
2. Check if the optional remote transmitter is in "thermostat" or "on" mode and verifyt there is a call for heat (f using a thermostat remote). Adjust the setting for heat.
3. Verify that the pilot hood is properly fitted and a pilot flame is directed to properly ignite the main appliance burner.
4. Replace the main burner orifice with a new orifice of correct size and type, or replace the pilot assembly. Under all circumstances follow the service instructions.
5. Remove the provided wiring harnesses from EV2 of gas valve (red base), and verify voltage at ignition between the EV1 terminal and the ground connection on the valve body.
5.1 If the voltage is greater than 0 then Replace Valve.
5.2 Or Replace DFC.
6. Check the pressure at the outlet pressure test point out according to the manufacturer's instruction. If not in accordance, replace the gas valve.
YES
Main burner remains ON
NO
1. Verify the electrical connections' integrity and make sure they are in accordance with the relevant system wiring diagram. If necessary replace the wire harness.
2. Check the pressure at the outlet pressure test point out according the manufacturer's instruction. If not in accordance replace the gas valve.
3. With the system in the OFF position, connect the voltmeter between the EV2 terminal (green base) on the valve, and the ground on the valve body.
Turn the system ON, let pilot light, and observe the following voltage sequence: once the pilot flame is proved, the voltage on EV2 should spike to approx. 5 VdC for approx. 2 sec and then drop to approx. 0.6 VdC continuously.
3.1 If the sequence is respected, replace the gas valve.
3.2 If the sequence is not respected, replace the DFC board.
Main burner modulates properly?
1. Replace the main burner orifice with a new orifice of correct size (partial blockage possible). Verify that the main burner flame modulates. If it does not modulate replace the gas valve.
2. Verify that the gas valve outlet pressure limits are in accordance with the manufacturer specifications. If not replace the gas valve.
FOR MANUAL HI/LO VERSION
3. Verify the flame changes while rotating the HI/LO knob on the front of the gas valve. If there is no change replace the gas valve.

# MASTER PARTS DISTRIBUTOR LIST

To Order Parts Under Warranty, please contact your local Empire dealer. See the dealer locator at www.empirecomfort.com. To provide warranty service, your dealer will need your name and address, purchase date and serial number, and the nature of the problem with the unit.

To Order Parts After the Warranty Period, please contact your dealer or one of the Master Parts Distributors listed below. This list changes from time to time. For the current list, please click on the Master Parts button at www.empirecomfort.com. Please note: Master Parts Distributors are independent businesses that stock the most commonly ordered Original Equipment repair parts for Heaters, Grills, and Fireplaces manufactured by Empire Comfort Systems Inc.

**Dey Distributing**
1401 Willow Lake Boulevard
Vadnais Heights, MN 55101

**Phone:** 651-490-9191
**Toll Free:** 800-397-1339
**Website:** www.deydistributing.com
**Parts: Heater, Hearth and Grills**

**Victor Division of F. W. Webb Company**
200 Locust Street
Hartford, CT 06114

**Phone:** 860-722-2433
**Toll Free:** 800-243-9360
**Fax:** 860-293-0479
**Toll Free Fax:** 800-274-2004
**Websites:** www.fwwebb.com & www.victormfg.com
**Parts: Heater, Hearth and Grills**

**East Coast Energy Products**
10 East Route 36
West Long Branch, NJ 07764

**Phone:** 732-870-8809
**Toll Free:** 800-755-8809
**Fax:** 732-870-8811
**Website:** www.eastcoastenergy.com
**Parts: Heater, Hearth and Grills**

**Able Distributors**
2501 North Central Avenue
Chicago, IL 60639

**Phone:** 773-889-5555
**Toll Free:** 800-880-2253
**Fax:** 773-466-1118
**Website: www. abledistributors.com**
**Parts: Heater**

# HOW TO ORDER REPAIR PARTS

**Parts Not Under Warranty**

Parts can be ordered through your Service Person, Dealer, or a Master Parts Distributor. See this page for the Master Parts Distributors list. For best results, the **service person or dealer** should order parts through the distributor. Parts can be shipped directly to the **service person/dealer**.

**Warranty Parts**

Warranty parts will need a proof of purchase and can be ordered by your Service Person or Dealer. Proof of purchase is **required** for warranty parts.

All parts listed in the Parts List have a Part Number. When ordering parts, first obtain the Model Number and Serial Number from the name plate on your equipment. Then determine the Part Number (**not** the Index Number) and the Description of each part from the following illustration and part list. Be sure to give all this information . . .

Appliance Model Number _____ Part Description _____

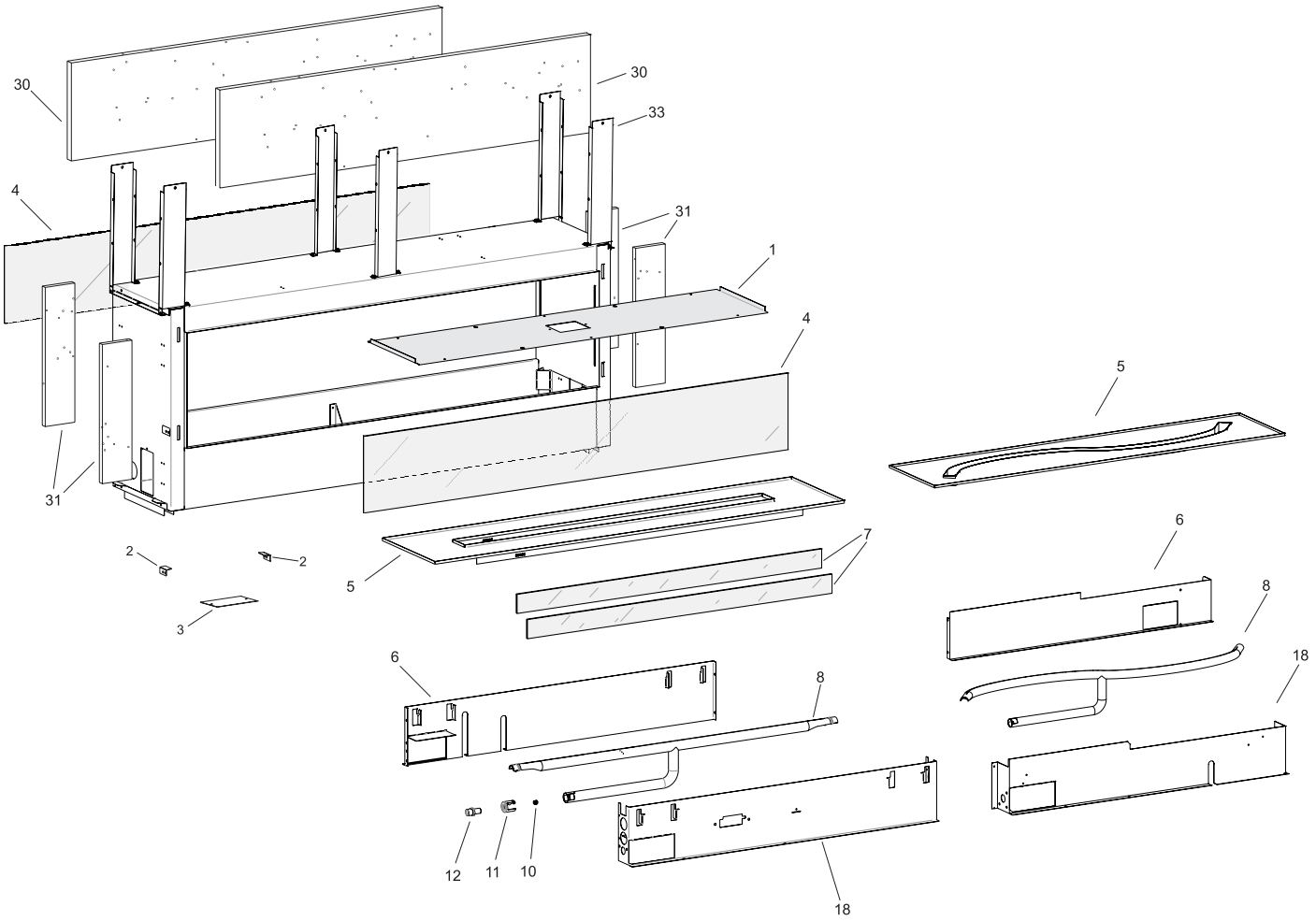
Appliance Serial Number _____ Part Number _____

Type of Gas (Propane or Natural) _____

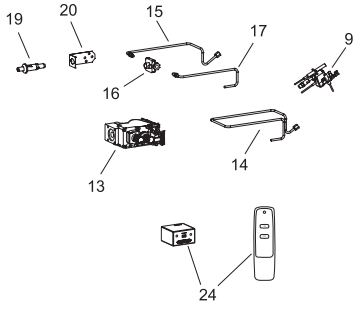
Do not order bolts, screws, washers or nuts. They are standard hardware items and can be purchased at any local hardware store.

Shipments contingent upon strikes, fires and all causes beyond our control.

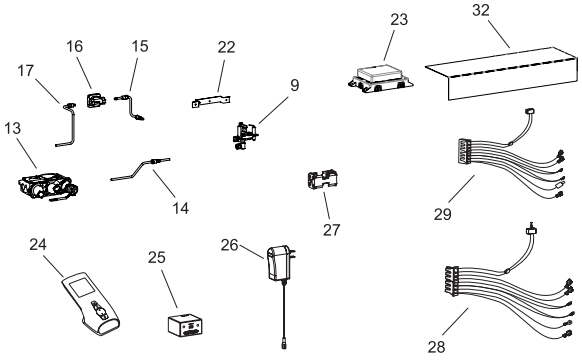
# VFLL48SP(3,9) EXPLODED VIEW




MILLIVOLT VALVE SYSTEM




IP VALVE SYSTEM




Actual parts may vary from those shown.

# VFL(L,Z)48SP(3,9) PARTS LIST

| INDEX NO. | MV PART NO. (SP3) VFLL48 | MV PART NO. (SP3) VFLZ48 | DESCRIPTION |
|---|---|---|---|
| 1 | 32901 | 32901 | INNER FIREBOX TOP ASSEMBLY |
| 2 | DV612 | DV612 | BRACKET (USED AS GLASS RETAINER) |
| 3 | 30291 | 30291 | ACCENT LIGHT COVER PLATE |
| 4 | R11746 | R11746 | GLASS |
| 5 | 32914 | 33362 | BURNER COVER ASSEMBLY |
| 6 | 32908 | 33364 | BURNER BOX BACK |
| 7 | R11747 | N/A | GLASS |
| 8 | R11745 | R11799 | BURNER, TUBE |
| 9 | R3623 | R3623 | PILOT ASSEMBLY - LPG |
| 9 | R3624 | R3624 | PILOT ASSEMBLY - NAT |
| 10 | P302 | P302 | ORIFICE 3.00mm - NAT |
| 10 | P265 | P265 | ORIFICE #49 - LPG |
| 11 | R7624 | R7624 | AIR SHUTTER |
| 12 | P313 | P313 | ORIFICE HOLDER |
| 13 | R3625 | R3625 | VALVE - LPG |
| 13 | R3626 | R3626 | VALVE - NAT |
| 14 | 29461 | 33373 | TUBING ASSEMBLY, PILOT (LP) |
| 15 | 29464 | 33375 | TUBING ASSEMBLY, REGULATOR TO PILOT (NAT) |
| 16 | R7063 | R7063 | REGULATOR, PILOT (NAT) |
| 17 | 29463 | 33374 | TUBING ASSEMBLY, VALVE TO REGULATOR (NAT) |
| 18 | 32682 | 33363 | BURNER BOX FRONT |
| 19 | R9761 | R9761 | PIEZO IGNITOR |
| 20 | 26304 | 26304 | IGNITOR BRACKET |
| 24 | FRBC | FRBC | TRANSMITTER & RECEIVER |
| 30 | 32675 | 32675 | BOARD, NON-COMBUSTIBLE (2 REQ'D) |
| 31 | 33014 | 33014 | BOARD, NON-COMBUSTIBLE (4 REQ'D) |
| 33 | 33553 | 33553 | STANDOFF SUPPORT |
| N/S | 33554 | 33554 | HARDWARE KIT (2 REQ'D) |

N/A - NOT APPLICABLE

N/S - NOT SHOWN

| INDEX NO. | IP PART NO. (SP9) VFLL48 | IP PART NO. (SP9) VFLZ48 | DESCRIPTION |
|---|---|---|---|
| 1 | 32901 | 32901 | INNER FIREBOX TOP ASSEMBLY |
| 2 | DV612 | DV612 | BRACKET (USED AS GLASS RETAINER) |
| 3 | 30291 | 30291 | ACCENT LIGHT COVER PLATE |
| 4 | R11746 | R11746 | GLASS |
| 5 | 32914 | 33362 | BURNER COVER ASSEMBLY |
| 6 | 32908 | 33364 | BURNER BOX BACK |
| 7 | R11747 | N/A | GLASS |
| 8 | R11745 | R11799 | BURNER, TUBE |
| 9 | R11327 | R11327 | PILOT ASSEMBLY - LPG |
| 9 | R11328 | R11328 | PILOT ASSEMBLY - NAT |
| 10 | P302 | P302 | ORIFICE 3.00mm - NAT |
| 10 | P265 | P265 | ORIFICE #49 - LPG |
| 11 | R7624 | R7624 | AIR SHUTTER |
| 12 | P313 | P313 | ORIFICE HOLDER |
| 13 | R11234 | R11234 | VALVE - LPG |
| 13 | R11233 | R11233 | VALVE - NAT |
| 14 | 32680 | 33377 | TUBING ASSEMBLY, PILOT (LP) |
| 15 | 32678 | 33376 | TUBING ASSEMBLY, REGULATOR TO PILOT (NAT) |
| 16 | R7063 | R7063 | REGULATOR, PILOT (NAT) |
| 17 | 29497 | 33374 | TUBING ASSEMBLY, VALVE TO REGULATOR (NAT) |
| 18 | 32690 | 33366 | BURNER BOX FRONT - LPG |
| 18 | 32689 | 33365 | BURNER BOX FRONT - NAT |
| 22 | 32822 | 32822 | PILOT BRACKET - LPG |
| 22 | 32673 | 32673 | PILOT BRACKET - NAT |
| 23 | R11127 | R11127 | CONTROL BOARD, PROFLAME |
| 24 | R11236 | R11236 | TRANSMITTER |
| 25 | R11235 | R11235 | RECEIVER |
| 26 | R11128 | R11128 | POWER ADAPTOR, 7.0 VDC |
| 27 | R11122 | R11122 | BATTERY HOLDER, AA WITH SNAP-ON |
| 28 | R11123 | R11123 | WIRE HARNESS, PROFLAME DFC |
| 29 | R11237 | R11237 | WIRE HARNESS, RECEIVER |
| 30 | 32675 | 32675 | BOARD, NON-COMBUSTIBLE (2 REQ'D) |
| 31 | 33014 | 33014 | BOARD, NON-COMBUSTIBLE (4 REQ'D) |
| 32 | 29520 | 29520 | HEAT SHIELD |
| 33 | 33553 | 33553 | STANDOFF SUPPORT |
| N/S | 33554 | 33554 | HARDWARE KIT (2 REQ'D) |

N/A - NOT APPLICABLE
N/S - NOT SHOWN

# WARRANTY

Empire Comfort Systems Inc. warranties this hearth product to be free from defects at the time of purchase and for the periods specified below. Hearth products must be installed by a qualified technician and must be maintained and operated safely, in accordance with the instructions in the owner's manual. Empire will not warranty any Boulevard fireplace that is not installed by the selling dealer or that dealer's direct contract agents.
This warranty applies to the original purchaser only and is not transferable. All warranty repairs must be accomplished by a qualified gas appliance technician.

***Limited Lifetime Parts Warranty with a Five-Year Limited Labor Warranty – Combustion Chamber and Heat Exchanger***

If the combustion chamber or heat exchanger (see parts list) fails because of defective workmanship or material, Empire will repair or replace at Empire's option.

Within five years from the date of purchase, Empire will pay reasonable labor to have the defective part repaired or replaced at Empire's option.

***Limited Five-Year Parts & Labor Warranty – All Other Components***

(Except Remote Controls, Thermostats, Accessories and Replacement Parts)

Should any part fail because of defective workmanship or material within five years from the date of purchase, Empire will repair or replace at Empire's option.

Within five years from the date of purchase, Empire will pay reasonable labor to have that defect repaired at Empire's option.

***Limited One-Year Parts Warranty – Remote Controls, Thermostats, Accessories, and Parts***

Should any remote control, thermostat, accessory, or other part fail because of defective workmanship within one year from the date of purchase, Empire will repair or replace at Empire's option.

***Duties Of The Owner***

The appliance must be installed by a qualified installer and operated in accordance with the instructions furnished with the appliance.

A bill of sale, cancelled check, or payment record should be kept to verify purchase date and establish warranty period.

Ready access to the appliance for service.

***What Is Not Covered***

Damages that might result from the use, misuse, or improper installation of this appliance.
Travel, diagnostic costs and freight charges on warranted parts to and from the factory.
Claims that do not involve defective workmanship or materials.
Unauthorized service or parts replacements.
Removal and reinstallation cost.
Inoperable due to improper or lack of maintenance.

***How To Get Service***

To make a claim under this warranty, please have your receipt available and contact your installing dealer. Provide the dealer with the model number, serial number, type of gas, and purchase verification. The installing dealer is responsible for providing service and will contact the factory to initiate any warranted parts replacements. Empire will make replacement parts available at the factory. Shipping expenses are not covered.

If, after contacting your Empire dealer, service received has not been satisfactory, contact: Consumer Relations Department, Empire Comfort Systems Inc., PO Box 529, Belleville, Illinois 62222, or send an e-mail to info@empirecomfort.com with "Consumer Relations" in the subject line.

***Your Rights Under State Law***

This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.

EMPIRE
COMFORT SYSTEMS
SINCE 1932

Empire Comfort Systems Inc.
918 Freeburg Ave. Belleville, IL 62220

If you have a general question about our products, please e-mail us at info@empirecomfort.com.
If you have a service or repair question, please contact your dealer.

**www.empirecomfort.com**